PERSONALITIES

By George F. Taubeneck

Development of Specialty Selling Formula

The ninth instalment of the editor's story on the Development of the Specialty Selling Formula by John H. Patterson, founder of the National Cash Register Co., appears on this page. Readers who knew John Patterson are invited to submit anecdotes about Patterson and his methods—incidents which might be illustrative of any of the material they may read herein. These anecdotes will be incorporated into the general story, with full credit given to those who send them in to us.

Numbers of readers have been sending us information amplifying the material in this series—information which will be published in the next issue of ELECTRIC REFRIGERATION NEWS.

The beginning of this instalment finds John Patterson talking about advertising.

Patterson's Advertising Policies

(Continued from Last Issue)

"One kind of type set solid is monotonous. If there are no breaks or displays, it is just the same as a speaker who talks away in a monotone, without ever raising his voice. A speaker to be effective must vary the pitch of his voice—so with type display, it must be varied.

"Large type, as a rule, is used for emphasis, just as a speaker emphasizes certain words in delivering an address.

"It is important to use plenty of white space in advertisements. There should be plenty of space between different articles, or over subheads, or between thoughts, or at the sides of an article when there are many articles on a page.

"It is a mistake, however, to break an article up with too much white space. If you do, it will look disconnected. White space is like the plain setting of a ring, which shows off the beauty of the jewel and brings it into prominence. So with white space, it should bring the idea or the thought into prominence."

Mr. Patterson had definite ideas about color in advertising, too. He brought up that subject next. "In using two colors, sey red and black, it is a mistake to make free use of the red just because it is there," he told his listeners.

"Too many lines of type in red destroy the very strength that you wish to get. One or two lines in red show up very strongly against the black ink of the other lines.

"Always remember that Uncle Sam charges no more to carry good advertising matter than he does the poor kind."

Of illustrations, photographic or painted, he had this to say: "Avoid unpleasant pictures, pictures of suffering, misery, poverty, or any sort of human wretchedness. That is a good rule to remember.

"You can show bad conditions. That's all right. Like the man who is losing money because he does not use a certain article. But it is a wise plan not to show pain. Never joke about anything sacred. Avoid all such illustrations," the N.C.R. president advised.

"Use plenty of pictures. If you can put a thought into picture form instead of type, do so. If it is a good, simple picture with the idea clearly brought out, all of your readers, no matter what their age or nationality, will grasp it.

"It is difficult to give any set of rules about the use of illustrations. Simplicity is important the same as it is in type matter. Useless curves or ornaments or anything of that nature minimizes the effect of the illustration.

"Try to get illustrations that are unusual. People like the unusual. They are attracted by something different, something out of the ordinary," he concluded.

In times of depression or panic, when other business men thought it useless to advertise at all, Patterson actually increased his advertising. When his advertising department and his well-trained and regimented sales force were working together at top speed, general business conditions mattered little to the N.C.R.

Like the electric refrigeration business during the dark years of 1930, 1931, 1932, 1933, and 1934, the specialty selling cash register business could successfully defy a depression.

* * *

Window Displays

Patterson used with fine judgment a wide variety of media for his advertising. Nothing escaped him. And everything dovetailed. Many of his ideas concerning newspaper and magazine advertising, for instance, were incorporated in his recommendations to store-keepers for arrangement of effective window displays.

When Patterson's instructions were followed, some striking, moving device was invariably placed in the center of the window for the sole purpose of attracting attention.

Usually this mechanism made no pretensions of demonstrating cash registers or of bringing the name of N.C.R. before the public. Its purpose was simply to attract the passerby to the show window. It was a "stopper."

After this initial step, it was up to the rest of the display to do the promotion and selling. Cash registers and display cards were attractively grouped behind and around the central "stopper" device, and carried a simple, succinct message to the looker-inner.

Material used for backgrounds must be plain and preferably dark in color, Patterson insisted. If one color dominated a background, it was also employed around the sides and over the floor of the window.

Here again may be noted Patterson's predilection for simplicity in advertising. Just as an ornate border might detract from a printed advertisement, so would an elaborate background kill or injure the effectiveness of a window display, he would argue.

In Patterson's use of simplicity and "white space' in his decorated windows, he was far ahead of the times. In those days the proprietor of the general run of mercantile establishments usually tried to squeeze a representation of his entire stock—together with a pet cat and the usual well-populated fly paper—into his storefront windows. Printed cards announcing political candidacies, or the pie supper to be given Thursday, Juvember 7 (three months ago), by the ladies of the First M. E. Church would also embellish the scene.

No window displaying *cash registers* had a "cluttered" or crowded effect, however. The number of machines exhibited was limited to one, two, or three. Concealed lights flooded the complete display. "Keep the lights out of sight," Patterson would say. "We aren't selling electric bulbs."

This notion of what constituted a good window display was not just inspiration. He gave the matter considerable thought. Old associates recall the time that he sent his general manager, sales manager, district manager to New York to join the local manager there for the express purpose of studying various decorative and lighting effects in window displays. Of course the president himself went along.

One night the five of them stood outside their New York showroom until past midnight, comparing various types of decorative and lighting effects as they were presented to them.

Although he imitated no one, he was wise enough to recognize a good thing when he saw it, and was quick to combine it with ideas of his own or to improve upon the original. As a result, one could almost credit the Birth of Window Display Showmanship to the prolific John H.

* * *

Excess Ideas

Now that we've finished our midwiferie on these specialty selling formula births, we find—like the boy who took the kitchen clock apart—some material and ideas left over which are too useful to throw away.

For instance: No story of John Patterson's business activities would be complete, we think, without giving in some detail the rules he followed in conveying his many ideas to his employees, and in keeping them "ahead of the market." Let him talk:

"The business that is satisfied with itself—with its product, with its sales, which looks upon itself as having accomplished its purpose—is dead.

"The actual burial may be postponed; but it is dead because it is not going forward. To my mind, nothing can ever be good enough; I am always dissatisfied; I preach dissatisfaction.

"I can always see where something might be better; and therefore our business is never at rest—and I never want it to be. The throbbing heart of business is the intense desire to do better. When that desire ceases, the heart stops beating.

"Every business which works for the betterment of humanity should be eagerly pressing forward and not waiting to be shoved forward. There are those who say that successful selling depends upon knowing what the public is asking for and then giving it to them.

"I do not agree with this viewpoint. I do not think that real success is attained by following in the wake of the public.

"My idea of successful business is this: Fill not only every known want of your customers, but also have in ready reserve that which you calculate they are going to need next year or the year after.

"That is, do not merely keep up with the market but preferably a few paces ahead in what you are actually offering and about a mile ahead in your reserve offerings.

"Every big business, individual or commercial, has followed this rule. The manufacturer who merely caters to his market is never a very big manufacturer.

"The vital point is: 'How far shall I keep ahead of the public?' If one goes too far ahead, the public will lose sight of him. That has been the unhappy fate of many brilliant men.

"There is only one way that I know to determine the exact lead to be taken, and that is by thoroughly knowing the whole market and its trends. We devote a great deal of attention to finding out, not only what the public wants and what it may need, but also just how ready it is to absorb new ideas.

"We achieve our results, first, by keeping our eyes wide open all the time and putting down all the information that comes to hand; and second, by considering that we are marketing a fixed product.

"There is no magic about it, no second sight, nor do I think it is a gift; it is simply a matter of not plodding along with blindfolded eyes and, when you have seen, of reasoning out the meaning so definitely that you can write it into a chart and hang it on the wall.

"We have made a policy to be just a short distance ahead, for the cash register has always had to make its market. We had to educate our first customers; we have to educate our present-day customers; and our thought has always been to keep just so far ahead that education of the buyer will always be necessary."

As to his methods of idea conveyance, Patterson once wrote, "If I should reduce my principles of idea-conveying to a creed, it would run something in this fashion:

"1. The nerves from the eye to the brain are many times lagrer than those from the ears to the brain. Therefore, when possible to use a picture instead of words, use one and make the words mere connectives for the picture.

"2. Confine the attention to the exact subject by drawing outlines and putting in the divisions; then we make certain that we are all talking about the same thing.

"3. Aim for dramatic efforts either in speaking or writing—study them out beforehand. This holds the attention.

"4. Red is the best color to attract and hold attention. Therefore, use plenty of it.

"5. Few words—short sentences—small words—big ideas.

"6. Tell why as well as how.

"7. Do not be afraid of big type and do not put too much on a page.

"8. Do not crowd your ideas in speaking or writing. No advertisement is big enough for two ideas.

"9. Before you try to convince anyone else, make sure that you are convinced, and if you cannot convince yourself, drop the subject. Do not try to 'put over anything.'

"10. Tell the truth."

Patterson depended upon his pencil—and plenty of white space in which to use it—to put practically all of his ideas across. He might have been a good cartoonist, had an accident of circumstance so inclined him. He had a pyramid chart that he found efficacious in conveying many of his thoughts to others, and replicas of which you'll find today in the offices of many of his former pupils, and pupils of former pupils.

"In order to confine the subject, to make sure of what is under discussion and to nail down points as made, I evolved the pyramid form of diagram," Patterson said.

"Here is how it works: First I draw a triangle and label its apex with the point I intend to make. I start with the conclusion so that there can be no mistake as to what I am about.

"The conclusion is the result of certain other secondary conclusions or facts. I find that most ideas divide themselves into five parts, which is a particularly convenient number, because in speaking of the parts it is possible also to use the five fingers of the hand to check off the points as made.

"Therefore I divide the base of the triangle or pyramid into five divisions and at the head of each division I write its name. The sum of the divisions is the main conclusion to be proved.

"Naturally each of the five sectional conclusions is composed of certain facts or arguments. I list them in columns under the subheads. The result is a structure of five pillars of elemental facts each supporting its capital fact. On the capitals rests the pyramid, at the apex of which is the conclusion. It is all a simple process of analysis."

In addition to the uses heretofore mentioned, Patterson found his pyramid chart effective in listing, charting, and recharting the various and varying duties of the company's several departments.

John Patterson loved life like he loved business—which, to him, were practically synonymous. He hoped to live to reach 100. He died at 78, which wasn't so bad, at that.

By the time he was 70 he was more of a memory, a legend, than a personality. Most of his ideas—his territory and quota system, his standard demonstration, his salesmen's conventions, his conferences, his contests, his winners' clubs, his direct mail, his training schools, his tricks to create competition among salesmen—all had been taken over and made a part of American business.

So quickly and so universally were his systems gobbled up and utilized that scarcely anybody gave a thought or a backward glance to the originator.

Notwithstanding his monumental supply of energy and his myriads of ever-changing interests, he was able to relate everything to his business. For him business was the complete outlet and vehicle for self-expression. To it he tied all his longings, hates, affections, ambitions, and prides. From it he got almost everything he wanted.

Patterson's life was one long siege of battles; he wanted it so. He once said, "If there ever comes a time in this business when courage will not be necessary; when it will not be necessary to fight against obstacles; I shall know it is time to put up the shutters, turn off the power, and draw the fires for all time."

For what did he battle? Perhaps it was for the elevation and ennobling of the salesman. It was Patterson who conceived of the transmutation of the old-fashioned drummer into the Missionary for Better Living.

* * *

Watson on Salesmanship

One of his own boys, Thomas J. Watson, now president of the International Business Machines Corp., sums up the high estate to which Patterson led specialty salesmen as follows:

"Salesmanship is probably the most important factor in the life of a nation, of a business, and of an individual. It may be described as the ability to present an idea, a product, or a service, accurately, attractively, and convincingly.

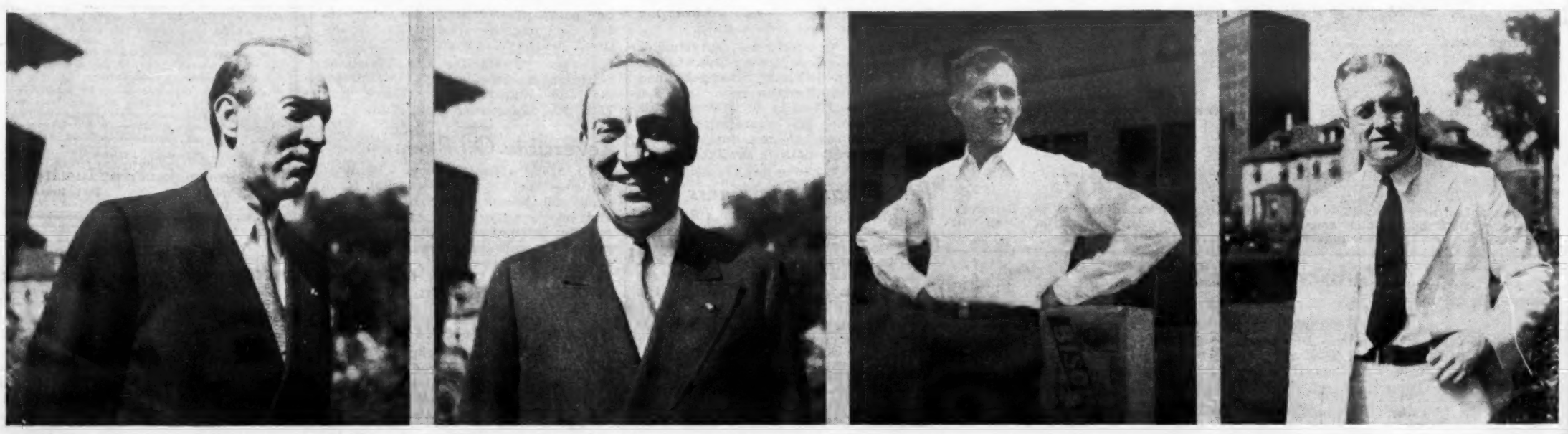
"Therefore, the salesman has a unique position in modern life, In business he is the man who stands between our wealth of resources, our tremendous manufacturing facilities, and our highly developed services—and the people who can use them.

"In no field is success more fully under the control of the individual than it is in sales work. For the thousands of products and services on the market, there are millions of prospects. To the salesman falls the responsible, interesting, and profitable task of bringing the two together.

"It is important that 'the man who makes the contacts' realize his responsibility, take advantage of the standing of his company and the reputation of its products, and make the most of his opportunity."

To which John H. Patterson undoubtedly would have added a hearty "Amen!"

Last of Warm Weather Leads Visitors Outside on Grounds of Refrigeration News



(1) W. W. Rhodes, sales manager of Kinetic Chemicals, Inc., notices that the gray brickwork of the new addition to the Business News building neatly matches the stone of the old. (2) "I'd like to work in this place myself," Mr. Rhodes grins. (3) Production Manager Jack Adams thinks it would be just dandy if summer lasted all year 'round. (4) Here is the author of the series of sales contest suggestions now running in the News—John Kumler, who simply will not be caught unawares.

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NY FHA Loans on Refrigerators Top All Others

11,218 Refrigerator Sales Financed by Bank During August

NEW YORK CITY—Approximately one-third of the FHA loans made during August by the National City Bank of New York City went for the purchase of electric refrigerators, reports E. C. Beam, assistant vice president, and head of the bank's personal loan department.

The National City Bank report is one of the first published breakdowns on how FHA-loaned funds are spent by borrowers, and it surveys a major portion of all modernization credit advanced in New York City, affording an analysis of current business conditions.

Loans made during the month totaled 6,762, and covered 34,934 purposes. Dollar volume was $2,255,765. To the end of August, the bank had made 21,924 loans, totaling $9,304,386 in dollar volume.

Use of the loans covered almost all manner of modernization operations. Refrigerators, with 11,218, led the field by a wide margin. Heating installations were next on the list, followed by plumbing repairs, interior decorating, painting (interior and exterior), roofing, major alterations, and other electrical appliances and equipment.

A total of 62 loans for the purchase of air-conditioning equipment is shown in the report.

The wide divergence in the number of loans, as compared with the number of purposes for which the money was to be spent, is accounted for by the fact that a given loan may be used for any stated number of purposes.

The large number of refrigerators

(*Concluded on Page 2, Column 1*)

Subjects Selected for A.S.H.V.E. Meeting In Chicago Jan. 27

CHICAGO—The 1936 annual meeting of the American Society of Heating & Ventilating Engineers will be held at the Palmer House here the week of Jan. 27, during which time the fourth International Heating, Ventilating, and Air Conditioning Exposition will be in progress at the International Amphitheater.

J. H. Milliken is chairman of the committee on arrangements for the A.S.H.V.E. convention. The program for the technical sessions is being prepared by the program committee—Albert Buenger, chairman, F. E. Giesecke, and O. W. Ott.

Discussions at the technical session will cover such topics as air bacteriology, heat transmission through

(*Concluded on Page 10, Column 1*)

Shaw Heads Research For Penn Switch Co.

DES MOINES — Penn Electric Switch Co., manufacturer of electric refrigeration and air-conditioning controls, has appointed Burton E. Shaw chief of its research department. He had served Penn for a short time as sales engineer prior to his appointment as research chief.

Mr. Shaw came to Penn from the Gilbert & Barker Mfg. Co., where he had acted as consulting engineer and research chief.

Prior to that time he had a varied experience in heating, ventilating, and refrigeration fields, including his work as test engineer in charge of the house heating division of the utilization laboratory for the New York Consolidated Gas Co.; instructor in heating, ventilating, and thermodynamics at New York university; chief engineer of the Pittsburgh Water Heater Co.; chief engineer of the Sonman Shaft Coal Co.; consulting engineer for the Kelvinator Refrigerator Co. of New Haven, Conn.; and instructor in the heat power laboratory at Yale university.

Mr. Shaw holds a B.S. degree and mechanical engineer degree from New York university, as well as an M.S. degree in mechanical engineering from Yale university.

Air-Conditioning Sales in Oklahoma City Total 49 in 7 Months; Houston Installations Near 1934 Mark; Milwaukee Reports Only 9 Jobs in 6 Months

HOUSTON, Tex.—Installations of air-conditioning equipment made here during the first eight months of 1935 totaled 27 units, as compared with 33 during the whole of 1934, and 64 during all years previous to 1935, bringing the total number of air-conditioned establishments in the city to 91.

Figures were compiled from a survey recently completed by the Houston Lighting & Power Co. and the 1935 REFRIGERATION AND AIR CONDITIONING MARKET DATA BOOK.

Largest single installation made to date this year was a 943-hp. building installation. Previous to 1935, the largest installation, from the standpoint of horsepower, was a 715-hp. office building job.

With regard to the largest number of installations in any one field, clothing stores take the lead with five, totaling 144.3 hp. The clothing store classification includes both men's clothing stores and women's apparel shops.

Noteworthy in this year's air-condi-

(*Concluded on Page 10, Column 2*)

OKLAHOMA CITY—Eighteen residential and 31 commercial air-conditioning installations have been made here during the first seven months of this year by Oklahoma Gas & Electric Co.

Residential installations range from the capacity necessary for one room to that for an entire home, and commercial installations from an individual office to the entire six-story office building of the Continental Oil Co. at Ponca City, requiring 400 hp. of electric drive.

At the end of the seven months' period, the total horsepower of air-conditioning equipment contracted by the utility was 306 per cent of that for the entire year of 1934. The average size of installation was larger than that of last year.

Installations of air-conditioning equipment made by the utility include the following: the Oklahoma City store of the J. C. Penney Co., department store; Scrivner Stevens Co., first wholesale grocer in the city to have air-conditioned offices; and the new studio of WKY in the Skirvin Tower.

Other installations were made in a number of ready-to-wear stores, a barber shop, a beer parlor, cafes, jewelry stores, a grocery, a bank, a funeral home, a cafeteria, and numerous offices.

MILWAUKEE—Only nine installations of air-conditioning equipment were completed in this city during the first six months of 1935, according to a survey which has just been completed by the Milwaukee Railway & Light Co., public utility.

This total compares with last year's total of 21 installations, and with the 49 made in Milwaukee up to the end of 1934.

That the figure will be increased considerably before the end of the year, however, is assured, for the six months' totals cover only systems actually in operation at the end of June. More than 100 hp. additional has been contracted for and is being installed, utility officials report.

Installations to the end of June were made in only six fields, and in but one of these was there a gain over totals for previous years. This

(*Concluded on Page 10, Column 2*)

Edison Institute Will Test Three Laws

NEW YORK CITY—Edison Electric Institute will go to the courts to test the constitutionality of three pieces of New Deal legislation which affect the electric industry, President Thomas N. McCarter announced last week, following a meeting of the board of directors.

Issues which E.E.I. will contest, Mr. McCarter said, are: (1) the public utility holding company bill of 1935; (2) that portion of the NRA which purports to give the government the right, by gift or loan, to aid municipalities in erecting power plants to compete with existing facilities; (3) TVA, which seeks to put the government directly in the power business, involving the destruction of existing facilities.

"In the opinion of eminent counsel," read a statement issued by Mr. McCarter following the directors' meeting, "the greater part of this legislation is unconstitutional.

"The power program of the Federal government involves the expenditures of billions of dollars, which, in the main, is to harass and destroy private operation in the electric light and power industry in the United States, despite the fact that the people of this country enjoy the most efficient and widespread electric service, at reasonable rates, of any people in any country . . .

"The board of trustees of the Edison Electric Institute has determined that the question of the constitutionality of these statutes should be presented to the courts at the earliest opportunity, in order that the rights of all may be judicially determined in accordance with the law of the land.

"To that end, it has retained the

(*Concluded on Page 2, Column 5*)

Pollen Content of Air in Detroit Area Higher Than Last Year

DETROIT—Hay fever sufferers in this vicinity who don't have the benefit of an air-conditioned home or office are having a tough time of it this year.

Up to Labor Day there was 100 per cent more ragweed pollen in Detroit air than for a similar period last year, reports Dr. Stanley W. Insley, an authority on hay fever.

Those who looked to the weather man for solace didn't find much comfort, because a search of weather bureau records showed that the earliest killing frost ever recorded in Detroit was on Sept. 21, way back in 1871.

Medical research has definitely proved that air conditioning removes the irritating factor, and that the symptoms of hay fever rapidly leave sufferers when they enter an air-conditioned room. Latest results of research on this subject, conducted by the College of Medicine, University of Illinois, were published in the July 3 issue of ELECTRIC REFRIGERATION NEWS this year.

Frigidaire Refrigerator Sales in August Near August, 1929, Mark

DAYTON, Sept. 16—Household electric refrigerator sales of Frigidaire Corp. continued to climb in August, maintaining a late season rise that in July brought an all-time record for that particular month, E. G. Biechler, president and general manager, reported today.

While August sales did not better the mark established in August, 1929, the number of units sold so closely approached the mark that the difference was negligible, Mr. Biechler said. Sales were 33.5 per cent above those in August, 1934.

Significant from a business improvement standpoint is the steady rise in sale of refrigerators for installation in apartment houses, said Mr. Biechler. This class of business, dormant for several of the later years of the depression, now has been improving month by month, he declares.

In August, for example, Frigidaire apartment house sales increased 41.1 per cent over the same month last year.

Finance Terms on Sales Of Electric Appliances Studied by EH&FA

WASHINGTON, D. C.—The terms upon which the Electric Home & Farm Authority shall finance the purchase of electrical equipment and appliances, and plumbing equipment, were discussed with representatives of the public utility and sanitary industries at conferences here last Thursday and Friday.

Questions upon which representatives of these industries expressed their views, and which will be decided in the near future by the EH&FA board of trustees, include the length of time to be allowed for repayment of loans, the rate or rates of interest to be charged, and the responsibility of the several parties to each financing transaction.

This last question has special reference to what liability, if any, shall be assumed by each of the following groups: appliance and equipment dealers, distributors, manufacturers, and utility companies.

Users of electricity in urban and rural areas whose purchases of appliances and equipment are financed by the EH&FA, will make payments on their loans monthly.

The EH&FA will not lend directly to the users, but will purchase individual contracts from the dealers.

Financing facilities will be made available for appliances and equip-

(*Concluded on Page 2, Column 3*)

New Company Buys Ebinger Assets

COLUMBUS, Ohio—Purchase of all the assets of D. A. Ebinger Sanitary Mfg. Co. by a newly formed organization, The Ebco Mfg. Co., was announced last week by A. R. Benua, president of the new company.

The entire personnel of the Ebinger Co. will be retained, with the exception of W. H. Bodurtha, receiver, and for the present all products previously made by the company will be continued. These include household refrigerator cabinets, self-contained electric water coolers, and bubbler drinking fountains.

The Ebco plant and general offices, erected in 1929, contain more than 100,000 sq. ft. of floor space, and has a complete metal working shop, including a production assembly conveyor set-up for refrigerator cabinets and water coolers. The plant also includes a gray iron foundry, sheet metal shop, production brass machine shop, and both wet and dry process porcelain enamel departments.

Mr. Benua has engaged in metal manufacturing for many years, starting his career with Hudson Motor Car Co. at Detroit, following his graduation from University of Michigan. He has operated Triumph Brass Co. here for 20 years, and only last month completed reorganization of Fisher Brass, Inc., at Marysville, Ohio.

E. E. Fox, general manager of the Ebinger Co., will be production manager of the new concern. Lee C. Love will continue as sales manager. Business now on hand will keep the present force of 100 employees busy for the remainder of the season, Mr. Benua said.

Next Seven Issues of News Will Feature Component Parts of Refrigerators

Next week's issue will be the first of a series of seven consecutive "special" issues which are to feature the various component parts of refrigeration systems, with editorial emphasis placed on the proper operation, care, and servicing of parts. The "inaugural" issue next week will spotlight refrigeration valves and fittings.

Complete condensing units, compressor parts, condensers, refrigerants, and compressor oils will be covered in the Oct. 2 issue.

Editorial attention will be focussed on motors and motor controls for refrigeration and air-conditioning applications in the Oct. 9 issue.

The Oct. 16 issue will deal with refrigerator cabinets, and such cabinet components and parts as finishes, insulation, gaskets, breaker strips, shelves, and nameplates.

Service and installation tools designed to enable the service man to do a better job will be treated in the Oct. 23 issue.

The Oct. 30 issue will feature evaporators for both household and commercial applications, and will also spotlight ice cube trays, and ice cube tray accessories.

"What's Inside" the refrigerator could well be the title for the Nov. 6 issue, which will center attention on refrigerator accessories.

'35 Advertising Expenditure Is Ahead of 1934

Refrigerator Manufacturers Spend $1,793,844 In 6 Months

PHILADELPHIA — Twelve leading manufacturers of household mechanical refrigerators spent $1,793,844 for advertising space in national magazines during the first six months of 1935, according to a compilation of advertising expenditures recently prepared by the Curtis Publishing Co.

The 1935 figure represents an increase of approximately 60 per cent over the $1,071,364 spent by refrigerator advertisers in the same period last year. However, the expenditure of Electrolux Refrigerator Sales, Inc., was not included in the 1934 compilation.

Leading the magazine advertisers was Frigidaire Corp. with $435,000 spent in national magazines during the first six months. Runnerup was Kelvinator Corp. which expended $302,635. Third place went to General Electric with a total expenditure of $223,406, with Westinghouse in fourth place with $198,600.

Advertising of Crosley Radio Corp. was spread through a greater number of magazines than that of any other manufacturer.

The report also shows that one ice refrigerator manufacturer, the Coolerator Co. of Duluth, Minn., advertised in a national magazine. Its expenditure of $21,600 all went for space in the *Saturday Evening Post*.

The *Saturday Evening Post* topped all other national magazines in the amount of refrigerator advertising carried during the first six months.

Total amounts spent by all companies in each publication, and the six months' expenditures by the individual advertisers, are published on page 7 of this issue.

Power Co's Jack-of-All Trades Makes 69 Sales In Mining Town of 2,000

PARRISH, Ala.—In this small mining town of 2,000 inhabitants, H. K. Majure, branch manager for the Alabama Power Co., has sold 69 electric refrigerators and one commercial installation in five months' time, despite the adverse conditions lined up against him when he started selling in this territory.

Salesmen who consider their lives continual canvassing crusades, should find inspiration in this picture of Salesman Majure, operating an office, reading 600 meters in three small towns, selling, installing, and servicing refrigerators. His efforts were so successful that he won a trip to New York for himself and his wife.

Besides the personal working problems confronting him, there were strikes, and threats of strikes, which made the miners wary of purchasing. This Mr. Majure combatted so well that in five months time he had passed his entire year's quota of $11,500.

Explaining his working principles, Mr. Majure said: "Get yourself sold first—get the confidence of the people. When two or three prospects in one neighborhood, buy, they will invariably lead you to new prospects."

Salesman Majure credits his wife with assisting him in making his sales record. He says: "My wife talks home electrification almost as much as I do."

Gaines Named Manager of G-E's Southwestern Area

CLEVELAND—J. G. Gaines has been appointed manager of the Southwestern district of the specialty appliance department of General Electric Co., announces A. M. Sweeney, sales manager of the department.

Mr. Gaines has been connected with the department's central station division here for the last six years. His first employment was with the Public Service Co. of Northern Illinois. Later he joined the Hurley Machine Co., from which he came to the refrigeration department of General Electric.

New York Bank Makes FHA Loans for Purchase of 11,218 Refrigerators

(*Concluded from Page 1, Column 1*)

may include several apartment house loans or blanket installations, although this is not stated in the bank's report.

Property owners received 32 per cent of the total number of loans made during the month, the other 68 per cent going to tenants.

Distribution of credit in the various boroughs, by percentages, follows:

Brooklyn	41
Queens	25
Manhattan	11
Bronx	8
Richmond	4
Other neighboring places	11

Analyzed as to purpose, the loans covered the following uses:

Refrigerators	11,218
New Heating Installations	3,929
Plumbing Repairs	3,207
Interior Decorating	2,654
Interior Painting	2,605
Exterior Painting	1,875
Roofing	1,817
Major Alterations	1,368
Other Electrical Appliances and Equipment	1,202
Garages	1,000
Concrete	883
Carpentry	695
Kitchen Equipment	489
New Bathroom	487
Heating Repairs	273
Excavating	261
Electrical Wiring	242
Tile	182
Flooring	154
Insulation	121
Landscaping	113
Brick	94
Air Conditioning	62
Elevators	3
Total	**34,934**

Electrical equipment eligible under the Class A group, for manufacturing and industrial plant loans up to $50,000, includes all production machinery adaptable to the business, which is purchased and installed on a property already improved by, or to be converted into, a manufacturing or industrial plant.

The loans are subject to the general principles which govern the Administration's determination of eligibility for equipment and machinery. Some of these principles are:

"An article should have a unit value sufficient to justify the application of time payments to its purchase. (It is suggested that loans should not be for periods which make any monthly payment less than $5.)

"The article should be of a durable nature, with a reasonable expectancy of useful life longer than the term of credit extended for its payment. It must be purchased and installed as a part of the equipment of the structure, or of the business conducted therein . . .

"Hand tools, small portable appliances, fragile articles, furniture, furnishings, removable decorations, installations meant to be, or by their character necessarily temporary, are ineligible.

"Loans for the purchase and installation of replacement parts for eligible equipment and machinery are insurable, but a loan merely for the repair of a machine is not insurable.

"Appurtenances that are physically separate from a major eligible unit, but usable only as a part of such unit, are themselves eligible.

"Any item, ineligible because of some disqualifying characteristic, does not become eligible merely because it can be used with an eligible item, or is bought therewith."

FHA Booklet Outlines Policy on Loans

WASHINGTON, D. C.—A booklet recently issued by the Federal Housing Administration outlines its policy regarding household equipment and modernization machinery that can be obtained, under the Modernization Credit Plan, with funds provided by private financial institutions, and insurable by FHA.

The booklet lists types of machinery and equipment that have been ruled eligible for loans up to $50,000 for apartment houses, multiple family houses, hotels, office, business, or other commercial buildings, hospitals, colleges, orphanages, schools, and manufacturing or industrial plants, classified as Class A properties.

It also gives the policy regarding Class B loans up to $2,000.

Electrical equipment for single-family homes (Class B) can be obtained on loans not exceeding $2,000. Eligible equipment, under FHA policy, is that which is necessary to make a home a complete unit, in a domestic sense.

This includes refrigerators (mechanical or ice), cooking ranges (electric, coal, gas, or wood), washing machines, ironers, and unit air conditioners, as well as heating, wiring, and plumbing systems.

Portable hand appliances and tools, such as toasters, vacuum cleaners, hand irons, lamps, percolators, and portable electric, gas, or oil heaters, are not eligible under FHA terms.

Electrical equipment that is eligible for the home, however, does include air-conditioning equipment, with humidifiers.

Cleveland League Gives 5 Selling Courses

CLEVELAND—Five sales training courses for men and women are being conducted by the Electrical League of Cleveland, under the direct supervision of Ralph H. Jones, secretary of the League.

Main purpose of the courses is to help sales people sell more electrical appliances. Courses are open to any salesman employed by a League member. Included in the series are four sales training courses, and one on group selling and effective speaking.

Classes held last week covered: how to sell home lighting, air conditioning, kitchen appliances, how to make more sales, and group selling.

A series of six weekly courses held each Thursday night, will treat the different aspects of presenting the sales story. Another series of six lessons, held Friday evenings, include: the belief triangle of speech, instructive speech, persuasive methods, three speech-keys which form a successful sales talk, and personality speech.

National Radio Show Opens in New York

NEW YORK CITY—The National Electrical and Radio Exposition, lasting 10 days and nights, opens in Grand Central Palace here today (Sept. 18), with exhibits of refrigerators, radios, and other appliances.

Methods of Appliance Selling & Financing Studied by EH&FA

(*Concluded from Page 1, Column 3*)

ment of standard quality and low cost.

In the conference with the utility industry on Wednesday, the utilities were represented by Hudson W. Reed of the United Gas Improvement Co., W. W. Freeman of the Columbia Gas & Electric Co., Mr. Austin of the Philadelphia Electric Co., and H. P. Hardwick of the Commonwealth & Southern Corp.

Nema Sub-Committee Presents Views

WASHINGTON, D. C.—Plans for the merchandising and financing of electrical appliances in cities and rural areas throughout the country were discussed recently at a hearing before trustees and officials of the Electric Home & Farm Authority.

Views of the electrical manufacturing industry were presented at the hearing by a sub-committee of the rural electrification committee of Nema. On the committee were G. M. Haskell, chairman of Nema's REA committee; A. B. Bylor, General Electric Appliance Co.; G. T. Dunklin, Westinghouse Electric & Mfg. Co.; and H. J. Walker, Frigidaire Corp.

Among subjects discussed at the meeting were the terms upon which electrical equipment and appliances shall be sold, the maturity of loans to be made by the authority, the amount of loans, and merchandising methods. Plans to extend the line of appliances and equipment which is eligible for financing by the authority were also discussed.

Particular attention was given to the possibility of including such appliances as feed grinders, milking machines, and milk coolers in EH&FA financing plans. Demand for these appliances is expected to increase substantially as the REA (Rural Electrification Authority) program goes forward.

No detailed plans of operation were announced following the conference, but the views of the Nema committee were taken under advisement, and an announcement as to the authority's program is expected to be made in the near future.

Max O'Rell Truitt has resigned as REA general counsel, and Abram Hewitt of Virginia has been appointed to succeed him. EH&FA trustees announced. Mr. Truitt will continue to serve as a trustee of the authority, however, giving special attention to legal matters.

Link Will Distribute FireTender Stokers

INDIANAPOLIS—Horace Link & Co., Paris, Ill., Frigidaire distributor for eastern Illinois and western Indiana counties, has been appointed distributor of Holcomb & Hoke FireTender coal stokers in the same territory.

Holcomb & Hoke has also started a nation-wide eight weeks' sales promotion contest among its FireTender dealers. The country has been divided into three sections, and prizes will be awarded in each division.

Sales promotion, and not sales volume, will be the determining factor in the contest.

Schlink's Stand on Consumers' Research Employees' Strike Appears Inconsistent With His Other Radical Philosophy

Recent strike of Consumers' Research employees against President Fred J. Schlink and the board of directors of the organization which published pamphlets and handbooks attacking many consumers' products and methods by which they were advertised, has given advertising trade publications a chance to strike back by pointing out the inconsistency of Schlink's labor stand with his radical philosophy on other phases of our economic life.

Points out the monthly publication *Tide*:

"Schlink, champion of the underdog, champion of the misguided consumer, avowed radical, labor sympathizer, anti-capitalist; Schlink, who shouted, thundered against advertising as an anti-social force—this man on an early fall morning turns anti-labor, anti-union, Red-baiter.

"It was news. Not only to advertisers but to the public, a part of which, at least, had put implicit faith in Schlink's and CR's social philosophy."

Report of Strike

Business Week reports the strike and its probable aftermath as follows:

"Labor problems have plagued CR for some time. Among its 70 employees turnover has been high, discontent common. Then difficulties came to a head. Weeks of union agitation directed by an organizer for the Eastern Central Labor Board, were concluded in the establishment of the first and only chapter of the Technical, Editorial, and Office Assistants Union, an A. F. of L federal union.

"John Heasty, local president and for six months CR's chief chemist, presented to President Schlink on behalf of the 40-odd union members a petition for recognition and establishment of a shop grievance committee. Few hours later, Chemist Heasty, Publicity Man John Kilpatrick, and Proofreader Donald Rogers —all active in the union—were ousted. Reason: 'Incompetence.'

"The union added a demand for the rehiring of the three, threatened a strike as the only alternative. President Schlink called into action his board of directors, composed of himself, his wife, M. C. Phillips ("Skin Deep"), J. B. Matthews ("Partners in Plunder"), and Dewey Palmer, CR's chief technician. Presumably left wing to the core, this board proceeded to out-Herod Herod. When Dewey Palmer objected to strongarm tactics, he was asked to resign.

Partnership Explodes

"More than a week of effort to reconcile the board to the union came to naught, despite the best efforts of Arthur Kallet, CR's secretary (at no salary), long-time friend of Schlink's, ardent pro-labor sympathizer. With that failure, the famous partnership went phht! When the ultimatum was delivered—and refused—on Wednesday night (Sept. 4), the strike was voted. Thursday morning found 60 of CR's 70 workers on the picket line.

"What effect the situation will have on the future of Consumers' Research is conjectural. Certainly its influence as a radical element will be dissipated. And since most of the 60,000 subscribers who pay $3 a year for its confidential service are presumably liberally inclined, publishing men who know their circulation problems argue it will go hard with CR."

The strike moved the New York *Herald Tribune* to prepare an editorial, which said, in part:

"Those who have been awed by the sterling purity of purpose, the sea-green incorruptibility and stern, unbending devotion to the common man of Consumers' Research, Inc., will be shocked to learn that there is war in Washington, N. J., dissension in that righteous heaven. There is, in short, a strike there.

"It is rather odd. The devoted workers in the laboratories, who have spent long hours testing the arsenic upon the apple or the tensile strengths of bed sheets in order to warn consumers against the wiles of manufacturer and advertiser, have walked out."

Workers Producer-Minded

Commenting on the *Herald Tribune* editorial, *Prinkers' Ink* grows satirical:

"In other words, the sacred temple of Consumption has been invaded. Its workers, dedicated to the holy cause of fighting for the rights of the consumer against those who want to sell things—these supposedly inspired laborers in the vineyard actually seem to want money for what they do.

"They don't require an awful lot of money, but they want some. A rather substantial raise so as to make the minimum wage $15 a week would, they think, give them sufficient zeal and courage to keep on trying to drive out the money changers.

"Now $15 is a lot of money—more than any righteous person with a heart beating and perhaps bleeding for the consumer, should try to exact for a week's work in saving the aforesaid consumer from avaricious and covetous advertisers. Mr. Schlink apparently knows this full well. Hence the strike.

"It must be, after all, that Americans are producer-minded even when, as in this case, they are working for the consumer."

Edison Institute Tests Legality of 3 Laws

(*Concluded from Page 1, Column 2*)

services of John W. Davis of New York to participate in the conduct of the case or cases which will contest the validity and constitutionality of the Public Utility Act of 1935.

"It has retained the services of Newton D. Baker of Cleveland to participate in the conduct of the case or cases which will contest the validity and constitutionality of the gift and loan of Federal money to induce or enable municipalities to compete with private companies now rendering efficient service throughout the United States.

"It has retained the services of Forney Johnston of Birmingham, Ala., and James M. Beck of Washington, D. C., to argue before the Supreme Court of the United States, in the case now pending, the constitutionality of the acts under which the Tennessee Valley Authority is spending huge sums of the taxpayers' money in its effort to further the doctrine of the abolition of private business for profit.

"The electric industry, to the extent that it is represented by the Edison Electric Institute, is of the opinion that it is its duty, in fairness to all, to assert and maintain its legal rights to continue to live and serve the people of the nation, subject to reasonable regulation by proper government authority, but that it will not and cannot acquiesce in having its properties confiscated merely to advance a theory of state socialism, already proven inimical to the rights of the American people."

Erstrom Will Manage Sales Promotion for Meyberg Co.

SAN FRANCISCO—H. G. Erstrom, formerly manager of the National Radio Wholesaling Code Authority, has been appointed sales promotion manager of Leo J. Meyberg Co., Norge distributor in California and western Nevada, announces President A. H. Meyer of the Meyberg Co.

Mr. Erstrom has been associated with the radio industry since 1927, when he was named executive secretary of the Federated Radio Trade Association. In 1928, when the name of the organization was changed to the National Federation of Radio Associations, the Radio Wholesalers Association was also formed, and Mr. Erstrom served as executive vice president of both until his resignation last month.

During 1933, he was in charge of comfort cooling sales for Carrier Engineering Corp., organizing a direct sales division in the Chicago market for air-conditioning installations.

Appliance Sales on West Coast Gain

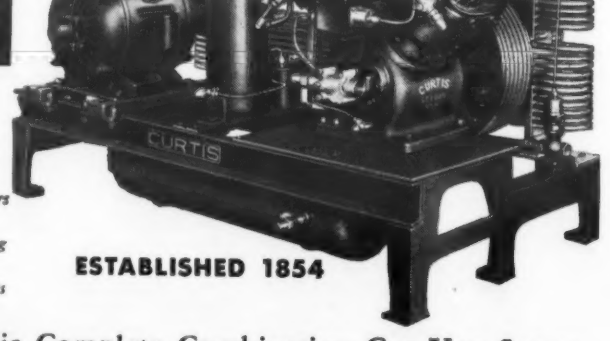
SAN FRANCISCO—Sales of household electric refrigerators and other electrical appliances for the month of July in the twelfth Federal Reserve District (Pacific Coast) showed a gain of 69.4 per cent as compared with July, 1934, it is reported by the Federal Reserve Bank of San Francisco.

In the Pacific Northwest the gain in appliance sales was 153.6 per cent, in San Francisco 130 per cent, and in Los Angeles 37.5 per cent.

Campaigns by utility companies for sales of load building appliances and the accompanying bargain rates being offered on power are having a very definite effect on such sales, the report stated.

"AN OLD NAME IN A YOUNG INDUSTRY"

CURTIS



A Complete Line—*59 Units*

Fair Policy—*81 Years' Successful Merchandising*

Quality Workmanship—*41 Years' Building Compressors*

Financial Stability—*AaA1 Highest Capital & Credit Rating*

Proven Design—*13 Years' Building Refrigeration Units*

ESTABLISHED 1854

Only by Building Permanently on This Complete Combination Can You Secure Sure Profits in This Fast Growing Industry—

←*Air View of Curtis 20 Acre Plant*

Curtis is a well integrated institution, having its own gray iron foundry, brass foundry, machine shop, pattern shop, tool room, electric welding department, structural shop and power plant.

CURTIS REFRIGERATING MACHINE CO.

Division of Curtis Manufacturing Co.
1912 KIENLEN AVENUE • ST. LOUIS, MISSOURI

M&E EST. 1866

COMMERCIAL DOMESTIC *and* BARE COMPRESSORS
1/6 to 10 H. P.

MERCHANT & EVANS CO.
MANUFACTURERS
..PHILADELPHIA..
EST. 1866 Plant: LANCASTER PA

Kansas City G-E Distributor Finds Success in Store With All-Negro Staff

KANSAS CITY—To sell anything to negroes, sell through well-known negroes. H. C. Doss, sales promotion manager, and Ralph Lane, retail sales manager of Midwest Electric Appliances, Inc., General Electric distributor, have developed that merchandising axiom out of their experience in organizing the company's store for colored people.

This store, the Walls Electric Co., is managed and staffed by members of the race they contact. Since it was placed under negro management less than a year ago, its sales have increased so greatly that it now stands near the top among the nine retail stores operated in Greater Kansas City by the Midwest organization.

Both Mr. Doss and Mr. Lane believe they have solved the problem of selling electric appliances to colored customers in the most effective fashion. The store has been operating 18 months, at first with a white manager and negro salesmen. When sales failed to reach expectations, it was decided to staff the store exclusively with negroes.

Prominent Negro in Charge

So Emmett Walls, a well-educated young negro who had a good record as a salesman in the same organization, and who in his school days had achieved prominence as a track athlete, was placed in charge. The store was given his name. Response was almost immediate.

Kansas City has a negro population of 40,000. This racial community appreciated the compliment thus paid them. They felt warmer toward the products sold at the Walls store and toward the organization back of those products. This feeling is in line with the growing tendency among negroes of this city to trade with those merchants who recognize them by employing one or more negroes.

Experience of Others

"In the beginning of our experiment," says Mr. Doss, "we had only two things to go by. We knew that the General Electric distributor in St. Louis was operating a successful store staffed by negroes, and we found out that the Crown Drug Co. had met with success when a colored pharmacist was made manager of one of its drug stores in the negro section of Kansas City.

"The Crown people told us he did better with the store than his white predecessor. We learned, too, that colored people are inclined to follow their own leaders, and that they have high respect for educated negroes. So we tried to get college men or their equivalent. In our white sales organization, this factor seems to make little difference.

Makes Better Salesman

"We found that a well-educated colored man will follow instructions to the letter, and make a superior salesman, whereas a white man with the same education, in many cases, tends to become too technical. Of course, we supervise our negro salesmen closely.

"Moreover, a good colored salesman appreciates the prestige that representation of our line gives him among his own kind. He works eagerly to deserve it. Contrary to a prevailing opinion, we do not find that education and leadership 'spoil' any of our negroes. Though they are winning their way, they are careful never to suggest that we give them privileges which might be embarrassing to the general organization.

"They do their best not to disappoint their white friends identified locally with the same line. And the whites in the Midwest team are proud of the record the negroes are making. The whole experiment has turned out to be a happy surprise to us."

Large, Neat Showroom

The Walls Electric Co., in the center of Kansas City's largest negro district, operates a neat showroom 22 ft. wide and 60 ft. deep, with a partition between front and rear.

Emmett Walls, the manager, is a graduate of Lincoln high school, Kansas City, and of Lincoln university, Jefferson City, Mo. He is widely known among colored people for his ability as a track athlete. One of his salesmen, Clifford Madison, also had quite a record as an athlete in Hutchinson, Kan., high school.

Robert H. Maddox, formerly in the battery business in Kansas City's negro district, and Lucile Crith, a graduate of Washburn College, are the other members of the Walls Electric Co. staff. Miss Crith is office manager and bookkeeper.

Credit is the principal hazard encountered by the Walls company, but this hazard is reduced through careful credit selection, on the part of the Midwest Electric Appliance headquarters staff. Only the best credit risks are accepted.

There have been only two repossessions of refrigerators or other units this year. One was because of wiring, and the other because of a death in the family.

Check Conditions of Prospects

Emmett Walls says: "Being well acquainted, we are in a position to check pretty well on conditions in each home. Character and a steady job are the chief considerations. It is fairly easy to find out whether the prospect has credit with any of the big downtown stores. If he or she seems reluctant to give us this information, we direct our selling effort elsewhere.

"A negro getting $85 a month can do almost as much with it as a white man who gets $150. The latter has social obligations to keep up. The average negro can save money in ways not open to the white man. For these reasons there are many prospects among negroes who would not be considered good prospects if they were white people."

Wil D. Galpin, general retail sales manager of General Electric's household appliance division, Cleveland, was in Kansas City recently, and visited the Walls store. Mr. Galpin was so impressed by Walls' bulletin to salesmen that he had it copied and sent out to all G-E retail store managers. The bulletin follows:

Bulletin to Salesmen

"1. Don't linger around in front. Bring your friends to the rear.

"2. Be careful of making too much noise while a customer is on the floor. It attracts attention.

"3. Let the person who is on the floor answer the door. Come out with a smile and a 'good morning,' or as the case may be. Make it pleasant for the customer.

"4. Be careful not to come out in front without your coat on.

"5. Be careful of your appearance. Your hands should be clean, your breath fresh.

"6. Don't forget, gentlemen, we have a lady in the store. Please respect her with due politeness.

"7. Don't forget your daily report. Everyone must turn in a report.

"8. The person who opens in the morning is held responsible for the display sheet that day.

"9. Be on time or arrange for someone to be in your place when you are to be on the floor.

"10. Please do not use literature to write on. Use scrap paper.

11. Salesmen, we are hanging around the store too much. Make your report and get going. You can't make sales if you take up too much of your day doing nothing. Don't hang around unless you have an appointment.

"12. We cannot operate unless you get the business.

"13. Remember, we are in business to make money. We can't reach the goal by not seeing people. There are three things that make business good: 1—Make customers feel at home; smile; never look downhearted; 2—See enough people and . . . 3—Make sales.

"14. Read these notices and don't take anything for granted, but know. Think them over and see if we can't improve our store and our sales.

"15. Don't forget your promise, men!"

Philadelphia Association Conducts Contest

PHILADELPHIA—Theme of the four weekly contests being conducted this month by the Electrical Association of Philadelphia is "Modernize your home with a complete electric laundry." Contest question is: "Why family laundry should be done at home."

The prize in each weekly contest is a complete electric home laundry—consisting of an electric washer and ironer — chosen from cooperating makes, and not to exceed $150 in combined retail value. The dealer who issues the contest blank to the winning contestant each week will receive $25 in cash.

The Home Maker's Club Program over WIP and 100-word broadcasts over KYW and WFIL are being used to inform the public of the contest. Entrants may obtain contest entry blanks at stores displaying the campaign banner. The blank provides room for the contestant to write a 50-word answer and bears instructions to mail the entry to the electrical association.

The 16 makes of electric washers and ironers included in the offer are: ABC, Apex, Automatic, Dexter, Easy, General Electric, Hotpoint, Kenmore, Meadows, Norge, Prima, Thor, Universal, Westinghouse, Zenith. and "1900."

GMAC Survey Shows Most Time Sales in $1000-2000 Class

CLEVELAND—Size and potentialities of the low-income class market for electric refrigerators is strikingly demonstrated in a survey of 10,000 GMAC-financed Frigidaire sales, reported in a recent issue of "The Leaguer," publication of the Electric League of Cleveland.

Approximately 95 per cent of the sales, the survey revealed, were made to persons whose annual income was less than $3,000, while almost 75 per cent were to persons with incomes of $2,000 or under. More than 60 per cent were in the $1,000-$2,000 income range.

Figures on incomes are from the reports made by purchasers to GMAC, and apply to time-payment sales only.

Percentages of sales to various income classes are:

Under $1,000	10.7%
$1,000 to $2,000	62.2%
$2,000 to $3,000	21.5%
$3,000 to $4,000	4.0%
$4,000 to $5,000	0.9%
$5,000 and Above	0.7%

Woman Closes Sales of 30 Water Coolers In Washington

WASHINGTON, D. C.—Mrs. E. L. Wrenn, star water cooler saleswoman for the National Electrical Supply Co., General Electric dealer here, has sold 10 RM-61 water coolers for the Walker-Johnson building; 12 RM-61 water coolers for the Washington Auditorium; and eight PB-3 water coolers for the Electrical Workers Benefit Association.

Sales Contests & How to Run Them

NO. 7—'DICE THROWING' COMPETITION GETS SALESMEN OUT TO EARLY MORNING SALES MEETINGS

By John Kumler, Sales Contest Manager
Buckley, Dement & Co., Chicago

We picked up this idea some years ago from Mr. Bray, Toledo manager of the Electrolux vacuum cleaner sales organization. Club Aluminum tried it and liked it.

Mr. Bray used a blackboard, a pair of dice, an alarm clock, and a pot (yes, just like Grandma's). In the pot, with the lid sealed down, was a prize—no contestant knew what until the contest was over.

The contest usually lasted a week, and it was used every week; it never grew old (you know that "one more hand and I'll have to go" lure). The prizes were sometimes money, sometimes gifts, or a hat certificate.

The salesmen were on commission. They didn't feel they had to attend the morning sales meeting, or if so, to be late was no crime.

Here's what changed it all—painlessly. The alarm clock was set for 8:15 a.m. Those who got there before it popped, got to throw a pair of dice, and record their score on the board opposite their name and in the day's column.

Those who were late could only flop one die and pray. If their prayers were answered, they got a 5 or 6 for their score, and that 5 or 6 could still be higher than both numbers some got by throwing two dice—as you know if you've ever tried to earn babies' shoes on your knees.

Any salesman who failed to show up—regardless of reason—got a goose egg for that day and lost the score he'd made the day before.

At the close of the week—high score took the pot.

Bray told me that attendance at most of his meetings ran 100 per cent—after trying everything from prayers to curses plus a daily lottery.

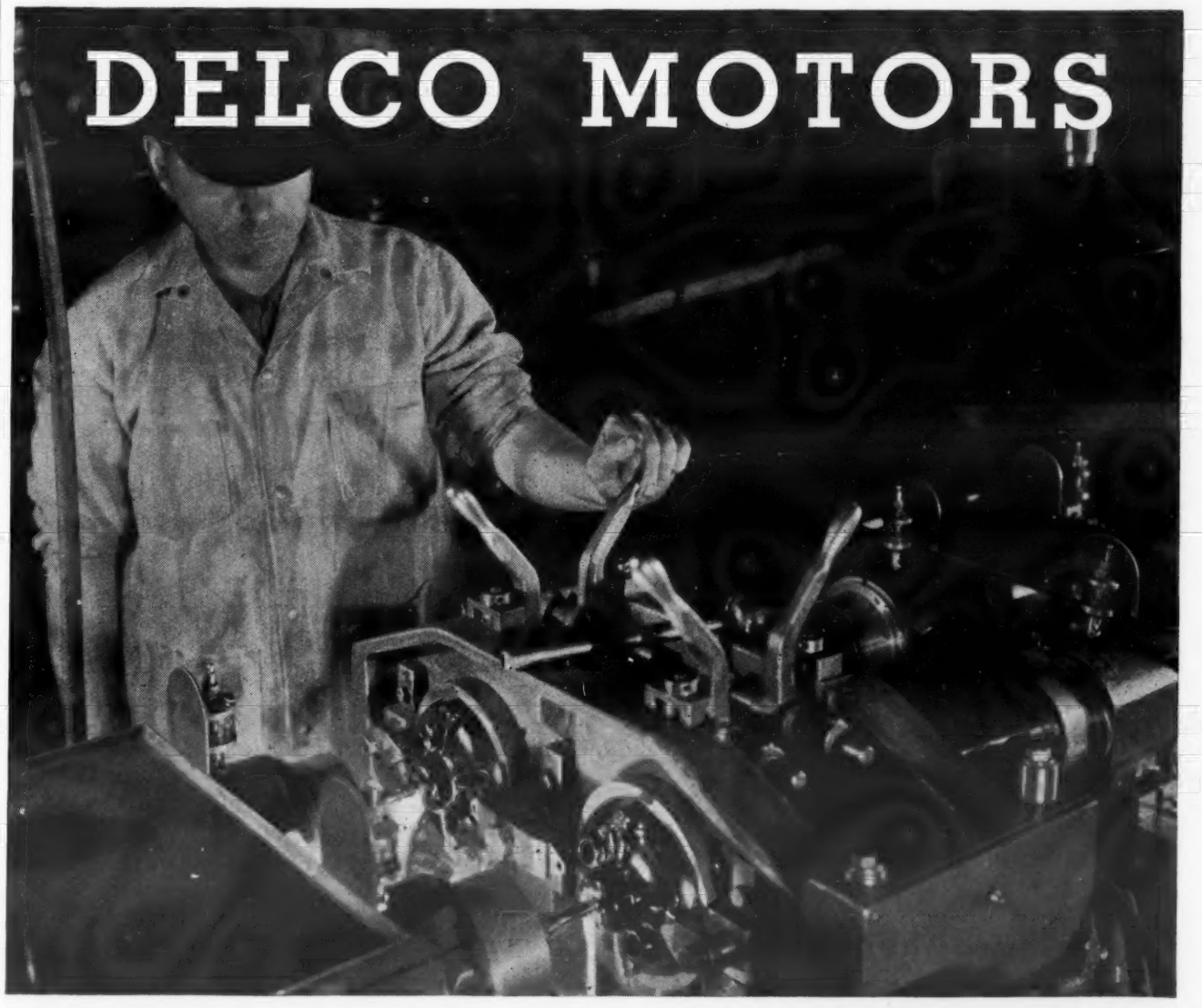
Paris Distributor for Kelvinator Concludes Salesmens' Contest

PARIS, France—Sales contests, exhibits, and star salesmen are just as much a part of specialty merchandising here as they are any place. Kelvinator Corp.'s French distributor, Markt & Co. (Paris), Ltd., recently completed an electric refrigerator contest which stimulated sales.

Three cash prizes were awarded, and, because it was a close run for second place, the contest maintained interest among the salesmen right up to the last minute. First prize of $175 went to Monsieur Albert E. Antonius, who sold 64 refrigerators during the two months of the contest, for a total of 1,052 points.

Monsieurs Jean Fournier and Paul Girard fought it out to the end for second prize, and, while Girard sold more refrigerators, Fournier's total sales amounted to 498 points against Girard's 463, giving him the second prize of $125 and Girard getting third prize of approximately $75.

Markt & Co. also believes in the sales possibilities of exhibits. At the 1935 Foire De Paris, or Paris Fair, they maintained a large exhibit of household and commercial electric refrigeration equipment.



ALL DELCO MOTORS HAVE DIAMOND BORED BEARINGS

To insure permanent quietness, a motor must have not only well lubricated bearings but also bearings which are accurately machined. The bearing surface must be smooth and the machining must be accomplished so as not to injure the crystalline structure of the bearing material. Accurate clearances must be maintained. To accomplish these objectives it is necessary that the bearings be diamond-bored—which is standard practice on all Delco motors. It is largely due to this precision operation that Delco motors are so well known for their quietness and dependability, and so widely used by manufacturers of the better household appliances.

DELCO PRODUCTS CORP., DAYTON, OHIO
Made in Canada by the McKinnon Industries, Ltd., St. Catharines, Ont.

Sideshow Barkers Bring to Life Westinghouse' Fall Merchandising Campaign

Circus days return in this rehearsal for the Westinghouse Fall Merchandising Carnival, which is making one-night stands in many cities this month. Against gaudy backdrops, "barkers" shout their sales stories in typical sideshow language. (1) "Heat can't hurt him . . ." the new range line. (2) "Haidon Sikh," master of magic—and electric refrigeration. (3) "Dirty, dirty, dirty . . ." but washers will clean up here. (4) "Giant auction . . ." of small appliances.

Carnival Atmosphere Runs Rampant At Fall Presentation Meetings of Westinghouse Plans & Products

DETROIT—In an atmosphere of sideshows, barkers, popcorn, and pink lemonade, Westinghouse brought its Fall Merchandising Carnival to Detroit last Wednesday, to show about 200 dealers and salesmen its program on refrigerators, radios, ranges, washers, ironers, dishwashers, and other electrical appliances during the fall and winter of 1935-36.

The troupe, led by Ringmaster E. A. King of the Westinghouse promotion department, included J. E. Hugo, central promotion manager, H. E. Hugo and Steve Brodie, and M. C. Schoenly of the Detroit distributorship. J. F. O'Donnell, central merchandising manager, was in the group, but had no official part in the program.

A circus band played typical carnival music, and each "barker," thrust into the limelight by Ringmaster King, harangued the audience with the merits of his product's quality, plans, and promotion and advertising activities.

Barker "Mique" Schoenly gave the fall refrigeration "spiel," telling of Haidon Sikh, master of magic; Sockow, the strong man (merchandising and premium plans); Terry, the tattooed man (advertising and publicity plans); and presented "Kitty Crusader and Alyce Ambassador," stars of the fall floor show of 16 "Streamlined" beauties (the two new models in Westinghouse's fall refrigerator line).

The complete electric kitchen drive was explained through the "World's Mightiest Sales Magician," while a pair of ponderous pachyderms, "The Two Biggest Cleanup Jobs on Earth," told the story of Westinghouse washers and vacuum cleaners.

An "Odditorium," which featured "The Boy With the Asbestos Seat," "The Original Quintuplets," "Secrets for Women Only," and "Mechanical Marvel Masters Mammoth Monster," elaborated on the merchandising possibilities of the electric range line. A "Giant Auction" focused attention on the line of small appliances.

The "World's Mightiest Midget" and "Crystal Gazer" gave Barker Steve Brodie a chance to demonstrate the features and futures of Westinghouse lamps, electric clocks, and radios.

Five Appliances Sold to Family Living in Garage

SCHENECTADY—Five major electrical appliances have been sold to a family living in a garage by T. W. Premo of A. Wayne Merriam, Inc., General Electric distributor here. The family had planned, two years ago, to build a new home, but due to financial reverses, putting up the garage was the limit of their construction activities.

Mr. Premo pointed out the advantages and economies of electric refrigeration, and sold the family a 7-cu. ft. G-E refrigerator. By showing how appliances could be purchased on the progressive plan, he later sold them a range, a washer, an ironer, and a hot water heater.

Marble Card Official Dies

GLADSTONE, Mich.—Ralph H. Garrison, sales manager for the past three years for the Marble Card Electric Co., manufacturer of electric motors, died here Aug. 18.

S-W Prepares Series of Radio Transcriptions For Dealer Programs

CHICAGO—Stewart Warner Corp. has prepared a series of 15-minute World Broadcasting System transcriptions for use by dealers and distributors. Titled "The All Star Radio Roundup," the program were recorded in the local WBS studio.

A 16 page prospectus, telling how dealers may sponsor this show on their local WBS affiliated station, has been realeased. Commercial talks included in the transcription play up the new S-W metal tubes and other features of Ferrodyne and Craft-built sets.

Individual programs feature selections by well-known entertainers, orchestras, and singers.

150 Attend Meeting of Anthracite Radio Co.

WILKES-BARRE, Pa.—The Anthracite Radio Sales Co., new Crosley distributor with headquarters in Scranton and branch offices in Wilkes-Barre and Pottsville, recently entertained 150 dealers and salesmen of Luzerne, Lackawanna, and 12 adjoining counties at the Irem Temple Country Club here. William Sehlanger, president of the distributorship, and LeRoy Winters, sales manager, were in charge of the meeting.

Neil Bauer, field sales manager for Crosley Radio Corp., presented the 1936 line of radios. He was assisted by Frank Hogan, district representative for the Crosley organization. Mr. Hogan later reviewed the features of the new Crosley refrigerators.

Dealers attending the outing enjoyed sports—golf, softball, volleyball, and swimming—a clambake, and chicken dinner.

Lois Baker Conducts Cooking School for Salesmen before Holding 'Hostess Day' to Which Public Is Invited

DETROIT—Miss Lois Baker, home service director for Caswell, Inc., General Electric distributor for this territory, has originated a "Hostess Day" to aid dealer sales of refrigerators, ranges, and other appliances.

When Miss Baker is scheduled for an appearance in a dealer's territory, she first holds a cooking school for the dealer salesmen to give them fresh training on the range before the public cooking school is held.

Following the salesmen's school, which is held in the evening, the dealer advertises a "Hostess Day" at which Miss Baker informally entertains women guests and serves ice cream and cake.

Miss Baker invites the women to bring their husbands to the evening cooking school, because, as she puts it, no matter how well women are sold their husbands must be sold also."

At a cooking school of this type held in Muskegon for the "research store" operated by Lou R. Maxon, Inc., 250 men and women attended. At the end of 30 days following the school, 30 refrigerators, 10 ranges, six washers, and one ironer were sold. At Jackson, 33 refrigerators, 14 ranges, and three washers were sold within 30 days after a school of this type had been held.

Miss Baker has also interested a number of Caswell's up-state and small dealers in staging a "Hostess Day" each Saturday on the sales floor. Dealers advertise the hostess day in the newspapers a day or so in advance. Salesmen are instructed in preparing junket ice cream mix.

On "Hostess Day" they make and serve ice cream to prospects who come in the store. The salesman seats his visitors in front of the refrigerator and explains the points of the appliance as the dessert is made and served.

DEHYDRATED REFRIGERATION COPPER TUBING IN WRAPPED COILS

This new method of packaging has a number of worth-while advantages to the Jobber and Service Man.

1. It saves much of the space formerly occupied by bulk tubing, making it possible to accommodate a larger stock in a smaller space.

2. Each coil is wrapped in heavy crepe paper, which affords adequate protection against atmospheric contact, dirt, or other foreign matter, and keeps the tube clean until ready for use.

3. Each package is labeled with complete information as to the size, gauge, length and whether plain or tin plated.

A large stock of WOLVERINE DEHYDRATED REFRIGERATION TUBE is always carried at the Mill for prompt shipment.

YOUR LOCAL REFRIGERATION JOBBER ALSO HAS A STOCK OF WOLVERINE TUBE.

WOLVERINE TUBE CO.
SEAMLESS COPPER BRASS & ALUMINUM
1411 Central Ave. Detroit, Mich.

BOOKS

Straight Thinking

Author: William J. Reilly, Sales Staff, The American Weekly. Publisher: Harper & Brothers. Pages: 168. Price: $1.75.

FOUR main steps leading to straight thinking in solving business problems are discussed and illustrated with anecdotes in this little book published just this year. Two simple questions confront the man who is interested in straight thinking, claims the author. These resolve themselves into the following:

"What are the *negative* tendencies—the faulty mental attitudes and common mistakes—that keep me from thinking straight, and how can I learn to avoid them?

"What are the *positive* rules for straight thinking and how can I learn to use them?"

Mr. Reilly devotes the first chapter to a brief identification of some of the faulty mental attitudes and mistakes that frustrate orderly thinking. The following chapters deal in detail with the positive rules for straight thinking.

Subtitles of the first chapter indicate the author's reasons why we don't think straight. They are as follows:

"We think we think."

"We don't know specifically what we are talking about."

"Our thoughts revolve about ourselves."

"Our physical condition affects our thinking."

"We learn by experience many things that are not so."

"Our attitude toward other people affects our thinking."

"We satisfy ourselves that we are right."

"We would rather tell than ask."

"We stifle our native curiosity."

Common mistakes in thinking, Mr. Reilly points out, are: mistaking the unique for the typical, drawing general conclusions from limited evidence, assuming that similar objects or situations are alike in all respects, overlooking differences in time, assuming opposites, misapplying general rules, assuming exclusive causal relations, and drawing faulty comparisons.

Having listed the deficiencies of the average human mind in the quality of straight thinking, the author proceeds to explain in a simple, definite manner the four steps to attain straight thinking, that is, making precise observations, defining the real problem, and considering possible solutions, securing evidence on possible solutions, and drawing conclusions.

These four steps may be broken down into 12 elementary rules which the author believes will straighten out anyone's thinking on any problem he may encounter.

Once mastered, these rules will not only straighten out the individual's own thinking, the author says, but will aid in helping him to detect flaws in the opinions and arguments of others.

With regard to making precise observations the author says the following:

"And after you have answered the WHAT, the WHEN, the WHERE, and the WHO questions in any business situation, you have evidence bearing on WHY that situation exists, for WHAT, WHEN, WHERE, and WHO are the definition of WHY."

If the individual uses all these rules he will obtain a sound premise upon which to base his opinions and his thinking will follow through, whereas if he starts out with a false premise, everything that follows will necessarily be wrong.

After the problem has been defined through the above analytical observation, all possible solutions to the problem should be listed. Solutions should be classified and the most promising ones chosen for further examination.

Every source of evidence should be utilized which might throw light on *all* sides of the question. Validity of the evidence should be appraised from the standpoint of its source. The mind should be kept open to new evidence on any side of the question.

Use of a balance sheet is advisable when making a decision. In this way, the author declares, positive and negative evidence may be set down in black and white, and such a balance sheet permits a quick and well-rounded view of advantages and disadvantages.

If a balance sheet is not used, the individual will find random thoughts for and against a certain decision tormenting him, and recurring so often that, finally, sick and tired of the whole process, he decides to do whatever is foremost in his mind at the time he gets tired of thinking.

Toward the end of the book, the author has inserted a chart to enable the reader of the book to visualize the four steps in straight thinking. The chart indicates that the first step has to do with the *expansion* of an idea, impression, or observation as it enters the mind, resulting in a factual view from the standpoint of *what, where, when,* and *who.*

The second step, according to the chart, is one of *contraction* of full observation into precise and analytical definition of the real problem. Step three is again *expansion*—the expansion of mental horizons to include all positive and negative evidence available.

The final step is again *contraction,* leading to elimination of the least promising solutions and selection of the best course or courses of action to be taken.

T. K. Quinn Explains the Idea Behind G-E's 'New American' Home Program

By T. K. Quinn, Vice President, General Electric Co.

OVER two years ago I conceived an idea of a new type of house. It was an original conception as I learned some time later; but that is another story.

Returning by automobile from a convention in Hot Springs, Va., through that beautiful historic country, I observed, as I presume every other visitor there has observed, the countless old chimneys looming stark and lonesome on every horizon, long after the log cabins about which they were built have decayed and disappeared. These grim spectres, reminiscent of the early days of our American ancestors, have endured the winds and rain of two or three centuries, but serve now only to remind the tourist, living so fully in the present, of human life which has gone before.

It seems perfectly clear that the builder of one of those early houses thought first of the sturdy chimney, as a central unit, and then built his house around it.

Later, as the country grew and prospered he might afford architectural luxuries and envision a picture on the landscape. But utility was the controlling element in the minds of the early settlers and they, evidently, did not stop to consider academically whether utility is or is not essential to beauty or art.

The chimney was the furnace, the air-conditioning plant, the cooking stove, the auxiliary lighting installation, and the family altar—all in one. Apparently the early builder constructed his house from the inside out, and not from the outside in and he left it to the ages to conclude that it was beautiful. It is perhaps not too much to say that he was not particularly interested in the appearance of has abode on the landscape.

Now, it happened that knowledge kept advancing, new and still newer equipment constantly appeared and science crept into that welcoming refuge just as science has crept into industry and transportation and everywhere else.

The candles have been taken out of the windows of "Home Sweet Home" but there is more light. With all its poetry, home could not remain immune to technical and mechanical progress, and we must learn again that they constitute a new poetry.

There is, or should be, if you please, a new chimney. Imagine it. A rectangular shaped, mechanical unit, probably 4 ft. square at the bottom (on the basement floor) and 30 ft. or so in height. In the basement it is the furnace, the air-conditioning plant, the electric laundry, the plumbing outlets.

On the first floor, one side of it is the connecting back of the electric kitchen, another a bath room. On the second floor, it includes the plumbing equipment, wiring, etc. for two, three, or four bath rooms. It is a complete moto-unit.

Beginning with such an imaginary unit we may build a house from the inside out, thinking in terms of health, convenience, and livableness. The organization of space within a house, for the convenience of living is the first consideration.

We put this new conception up to the architects of the country in a national prize competition which attracted over 9,000 entrants. So many drawings were received that hung upon wires, one had to actually walk a lineal mile simply to see them. The result was a revolution in design.

Fifteen years ago there was no such thing as an electric kitchen as we know it today. The relatively few automatic refrigerators in use were hitched to basement compressors, electric cookery was just beginning to appear as also was electric dishwashing, and automatically controlled heat. Air conditioning had hardly been thought of and scientific lighting and adequate wiring were radical ideas.

All this equipment is provided in the "New American" Home which is built to live in as well as to look at. In it the new science of better living becomes a reality. Several hundred of these "New American" Homes are now in the process of construction throughout the country. They will open for demonstration in October, heralded by a national advertising campaign in magazines and newspapers, and widely supported editorially.

People will build and buy houses when they can see and feel the superiority of modern styling and equipment just as they buy automobiles. But 1900 model houses cannot be expected to excite interest or stimulate desire any more than 1900 model or 1930 model automobiles. We are looking for the 1936 models, and the truth is that 1936 model houses are much further ahead than is commonly understood.

New Quarters Dedicated By Norge Distributor In Nashville

NASHVILLE, Tenn.—Formal opening of Tennessee Valley Appliances, Inc., distributor of Norge appliances here, in its new location on Eighth Avenue, was celebrated early last week. Guests and representatives of corporations whose products are distributed by this company, attended the opening.

J. O. Smith, president of Tennessee Valley Appliances, Inc., greeted those who came to view the lines displayed in this new, attractively equipped building, which is three stories high, and a block long.

Representatives from manufacturing concerns present on the opening day included T. P. Hallock of Norge Corp., C. Y. Keen and J. H. McKee of the RCA Victor organization, and W. M. Tilley of Whiting Corp., manufacturer of the Whiting automatic coal stoker.

Reports on the first day's activities were broadcast four times during the day over radio station WLAC. A special floor staff was maintained throughout the week to demonstrate models, and to conduct visitors around the new show rooms.

Heralding the opening event, this company ran a 16-page supplement in the *Nashville Banner* on Sept. 1. This contained material on the formation of the company, personal history of its executives, pictures, and accounts of the work done by its various departments, facts about the lines carried, and congratulatory advertisements inserted by manufacturers' whose lines are featured, and friends.

Officials of the company besides Mr. Smith, include, A. H. Harned, vice president, and W. W. Hardcastle, secretary-treasurer.

Sales Idea of the Week

By V. E. (Sam) Vining, Director of Department Store Sales, Westinghouse Electric & Mfg. Co.

"Sam," says a retail salesman from—you guess the city, "here's the way I feel—you write it."

Here it is:

I'm tired of being considered a Prima Donna just because I make my living selling things.

And I'll bet you are too.

I'm tired of being analyzed, and vivisected, and subdivided.

Of being "Enthused," and "Inspired."

I'm no laboratory specimen.

I don't mind being kidded, I don't mind being razzed. If I couldn't take it, I wouldn't be much good in my business.

Education; I eat up—Sane Direction; I follow and appreciate but— —

Damned if I don't resent the idea that every fat guy—below or above the collar button—has the privilege of telling me "JUST-EXACTLY-HOW-I-SHOULD-DO-MY-JOB" when all I get out of the whole talk is the conviction that most of them never have—and couldn't make a living at it.

Which I am doing.

I am tired of generalities. I am tired of superlatives, and arguments based on both of them.

Especially am I tired of listening to men who imply that if I will be good and work hard I may eventually reach their station in life and be permitted to go around trying to convince other salesmen that I too have two belly buttons.

I may be wrong, but I look on selling as a business, and myself as a business man. And I would like to be treated as such.

All evidence to the contrary—Salesmen are human.

A TRAY FULL OF TRICKS!

"COLD FACTS"
No. 10

Put Flexible Rubber Trays and Grids on your sales force. They help you" discover" new prospects. And be sure to INSIST that all models of the refrigerator you sell come factory-equipped with these modern conveniences. Write to your manufacturer or direct to us. The Inland Mfg. Co., Dayton, O.

Prospect: "Yes—I do have an automatic refrigerator. But it was born before rubber trays!"

Salesman: "Then you no doubt need a new one—such as mine—right up-to-date—including Flexible Rubber Trays."

Flexible Rubber Trays and Grids

ARE NOW STANDARD EQUIPMENT ON 90% OF ALL AMERICAN MAKES OF AUTOMATIC REFRIGERATORS, AND MANY FOREIGN MAKES

Power to Operate G-E Electric Home Costs $13.40 a Month

CHICAGO—Dubbed the "forefather" of the General Electric "New American" home by J. S. Duncombe of R. Cooper, Jr., Inc., G-E distributor here, the year-old "all electric" home of Titus G. LeClaire of the engineering staff of Commonwealth Edison Co. of this city, uses approximately $13.40 worth of electric current per month in operating its many electrical appliances.

When Mr. LeClaire decided to build a home a year ago, he consulted the Cooper organization about plans for an all-electric kitchen. The distributor's kitchen planning department worked out the details for the kitchen and also sold Mr. LeClaire on the idea of an electric oil furnace and air-conditioning equipment.

The distributor organization secured an order for a "G-E" home, equipped with the following: T-9 refrigerator, G-13 range (calrod equipped), TM-14 timer and clock, DSO dishwasher-sink, model L washer, LA-4 oil furnace, AA-4 air conditioner, and a calrod twin unit for the laundry.

From outward appearances, the LeClaire home is in the $15,000 price class, but from a functional standpoint it is worth more. The home was designed from the inside out, with work centers, storage space, and place for major electrical equipment all planned out before the outer framework was considered.

Construction was begun on the home before the General Electric "New American" home program was announced, but it meets all specifications of the program.

Standard Markets Range With Two Ovens

TOLEDO—Standard Electric Stove Co. of this city has just introduced its new "Patrician" model, a double-oven electric range, retailing at $275.

Equipment included with the new range consists of a convenience outlet and a clock receptacle for each oven; a cooking top with five holes for 8 or 6-in. burners or unit cooker and one hole for 10-in. burner; three utensil cabinets, each 16x6x18 in.; and a cabinet base with toe space.

Dimensions are as follows: width left to right—54½ in.; width front to back—25 in.; height to cooking top—36 in.

New Miami Dealer Handles Norge, Apex

MIAMI, Fla.—Lyon, Ferris & Morton, Inc., newly organized electric appliance firm located at 1935 N. E. Second Ave. here, is handling Norge refrigerators, washing machines, ranges, and ironers; Apex refrigerators, washing machines, and vacuum cleaners, and L. & H. electric ranges.

H. R. Lyon, president of the new concern, was formerly Florida distributor for Speed Queen electric washers and Simplex ironers. Previous to that time, Mr. Lyon was district manager for the Easy Washing Machine Co. and the Maytag Washer Co. in New York, Indiana, Pennsylvania, and Florida.

Major Ferris was connected with Mr. Lyon from 1928 to 1930, when he established his own sales agency of the same line, continuing until the organization of the new company.

Mr. Morton, the third member of the company, formed his own dealership in 1934 as the Little River Appliance Shop. From 1928 to 1934, Mr. Morton was also associated with Mr. Lyon.

Frigidaires Featured at Honolulu School

HONOLULU, Hawaii—The *Honolulu Advertiser* conducted a five-day cooking and homemakers' school here beginning Aug. 20 under the direction of Miss Pauline Edwards, home economist.

Four sessions were held each day—three in the morning and one in the evening. Miss Edwards demonstrated kitchen equipment, gave hints on better housekeeping, and presented a program of practical recipes.

Electrical equipment used, including Frigidaire electric refrigerators, Universal gas stoves, ABC washing machines, etc., was furnished by the von Hamm-Young Co., Ltd., territorial agent for Frigidaire Corp.

Local stores and national industries cooperated in the cooking school activity. Electrical displays in the lobby included two Frigidaire refrigerators—one double-door and one single-door type; two Universal gas stoves; two Atwater-Kent radios; and ABC washing machines.

During the intermission between lectures and demonstrations, a style show was given.

One feature of the cooking school was a nursery for children of the housewives attending.

Cal Mitchell Catches Kelvinator Factory Executives in Some Informal Poses

There's a candid cameraman in the Kelvinator camp now—Cal Mitchell, district manager for the Carolinas—and here are some samples of his work on the company's executives. (1) Vice President H. W. Burritt, somewhere in Virginia, on a motor tour of southern distributors. (2) It's time for dessert—and Walter Jeffrey, domestic advertising and sales promotion manager, likes watermelon. (3) President George Mason postpones lunch to check some last-minute plans. (4) Godfrey Strelinger, assistant to vice president, and his secretary, Mrs. Bernice Talbot.

(1) The birth of an advertising idea. Fred Hulburd, in charge of cooperative advertising funds, Mr. Jeffrey, and John Garceau, commercial advertising and sales promotion manager, in a lunch-time conference. (2) V. J. McIntyre, domestic sales manager, maps a fall campaign. (3) Cameraddict Cal Mitchell, himself. (4) W. E. Saylor, operations manager, advertising and sales promotion department, thinks of the work he'll have on his hands this fall, when Kelvinator starts its nation-wide series of distributor conventions.

Geyer, Cornell & Newell Lease Detroit Office

DETROIT—Local offices of Geyer, Cornell & Newell, Inc., advertising agency handling the Kelvinator account, will be located in the New Center building here, agency officials signing a lease for quarters on the seventh floor of the building.

Dealers Hear 'Presence' Feature of Spartons

HARRISBURG, Pa.—"Presence" in radio reception, being featured by the Sparks-Withington Co., in its new Sparton radios, was introduced to more than 100 Sparton dealers at a joint meeting held recently by the Excelsior Radio Co., Harrisburg, and the Harper Myers Co., York, Pa., in the Excelsior company's sales room.

Arrangements were made with a local radio station to broadcast a special program especially for the assembled dealers.

Joe Vosmik & Hal Trosky Win Refrigerators With Home Runs

CLEVELAND—Home runs that brought G-E refrigerators into their kitchens were made by Joe Vosmik, leading hitter in the American League, and Hal Trosky, both of the Cleveland Indians, in a game between Philadelphia and Cleveland.

When G-E distributors were holding their ninth annual fall sales convention here, they were guests at the ball game one afternoon. Officials of the specialty appliance department decided to offer a G-E refrigerator to each Cleveland player who knocked out a home run that day.

No home runs were hit that day, so the offer was extended to the following day. Vosmik and Trosky each got a four-bagger and as a result, a refrigerator. Dietrich, Philadelphia hurler who won the game that day, also was presented with a refrigerator.

Edison Institute Will Promote Housewares Week Starting Dec. 2

NEW YORK CITY—A national "Electrical Housewares Week" will be conducted Dec. 2 to 7, 1935, by the Edison Electric Institute in cooperation with the National Electrical Manufacturers Association.

Promotional plans, special logotypes, and display posters will be supplied by the Electric Housewares Committee to central stations, department stores, and other electric dealers for use in connection with a $600 display contest.

"Electrical Housewares Week" will be featured in trade, national, and local advertising of manufacturers, central stations, department stores, and other electric dealers.

Electric manufacturers participating in the activity are:

American Electrical Heater Co.; General Electric Co.; Hamilton-Beach Mfg. Co.; Knapp-Monarch Co.; Landers, Frary & Clark; Manning-Bowman & Co.; Proctor & Schwartz Electric Co.; Robeson Rochester Corp.; Swartzbaugh Mfg. Co.; The Silex Co.; Waters-Genter Co.; and Westinghouse Electric & Mfg. Co.

B. & O. Radio Has Kitchen In New Display Room

NEWARK—For use of dealers who want to show prospects how appliances look in a real kitchen, B. & O. Radio, Inc. here has included a model kitchen in its recently renovated headquarters. The new kitchen includes a Norge refrigerator, range, washing machine, and ironer.

In addition to the kitchen, the company has a new display room about twice the size of the former showroom, and has provided a sales conference room.

August sales of Norge products made by the company were more than three times those of the same month last year in the northwestern New Jersey territory.

G-E Transfers Watts to Assist G. D. Kobick

CLEVELAND—R. W. Watts has been transferred from the sales promotion division to the apartment house division staff of the General Electric Co. He is assisting G. D. Kobick, apartment house division manager, and M. J. Young in field contact work.

Beyer Opens New Store

SAN ANTONIO, Tex.—The Beyer Co., electric refrigeration and radio firm, has just moved into new quarters at 223 N. St. Mary's St. in the downtown shopping district. The company handles Norge refrigerators.

154 Units in 212 Days Sold by Small-Town First-Year Dealer

PITTSBURG, Calif.—That you don't have to be big to be successful has been proved by Henry Pratt, General Electric dealer here, who sold 154 refrigerators in 212 days (his yearly quota had been set at 75), in this town of 9,000 population, of which only 1,000 are native white families. Electric meters number 2,000.

Electric Appliances, Inc., G-E distributor with headquarters in San Francisco, appointed Mr. Pratt a dealer in January of this year. He purchased two refrigerators the first month, six in February, and after that averaged a sale a day up to the end of July. The total of 154 represents approximately 8 per cent of his meter territory.

His original store was an 8½x10½-ft. room—just large enough for one refrigerator and one desk. He sold about 100 machines from this cubicle. He moved into a larger store in June.

"Pratt does all his own selling," states R. Grosjean, advertising and sales promotion manager for the distributorship, "working as long every day as he can talk to anyone who needs or can buy a refrigerator. Hours mean nothing, and he wastes no time in idle talk . . . he spends little time behind his desk. He carries most of his office in his pocket.

"There is very little expense connected with his operation," Mr. Grosjean continues, "because he makes all minor adjustments himself, and does his own delivering. He rigged up a carrier on the back of the family car, large and strong enough to carry all household models, and in this economical manner he delivers with the help of a young fellow whenever help is needed. He keeps his excess stock of refrigerators, usually six or seven machines, in the front room of his home."

Mr. Pratt delivers refrigerators crated, uncrates them in the customers' front yards, and gives them the crates for firewood.

THESE four factors determine the success of any distributor's franchise. They are especially important in the commercial refrigeration field under today's conditions.

Copeland distributors are fortunate in this respect. In EXPERIENCE, Copeland is a veteran of 18 years; the Copeland PRODUCT is acknowledged to be superior in design, in quality construction and in extremely low-cost operation; in RESOURCES, Copeland is in an envious financial position; in STABILITY, Copeland points to an envious record of constant progress and growing success. The Copeland franchise meets the most stringent requirements. Write for details.

COPELAND REFRIGERATION CORPORATION
Manufacturers of a Complete line of Household and Commercial Refrigeration
Holden Ave. at Lincoln . . . DETROIT, MICH.

Copeland
DEPENDABLE Electric REFRIGERATION

ANSUL CHEMICAL COMPANY
MARINETTE » » » » » WISCONSIN

STATISTICS

Cost of Advertising Household Refrigerators in Magazines in First Six Months of 1935

The following figures, compiled by Curtis Publishing Co., give the total expenditures of 12 manufacturers in national magazines during the first six months of 1935. See story on page 1.

Frigidaire

Frigidaire Corp.

Saturday Evening Post	$125,235
Collier's	96,800
Ladies' Home Journal	71,280
Woman's Home Companion	69,165
Good Housekeeping	54,120
Liberty	17,000
New Yorker (City)	800
Forbes	600
Total	**$435,000**

Kelvinator

Kelvinator Corp.

American Weekly	$ 81,500
Saturday Evening Post	63,135
Good Housekeeping	43,800
Collier's	40,800
McCall's	38,400
Liberty	35,000
Total	**$302,635**

General Electric

General Electric Co., Refrigeration Division

Saturday Evening Post	$ 86,940
Ladies' Home Journal	25,650
Good Housekeeping	23,600
Woman's Home Companion	16,500
American	13,500
Better Homes & Gardens	13,500
National Geographic	11,680
Collier's	11,000
American Home	7,125
Fortune	4,800
Parents' Magazine	3,000
Time	2,460
Popular Science Monthly	2,001
House Beautiful	1,650
Total	**$223,406**

Westinghouse

Westinghouse Electric & Mfg. Co.

Saturday Evening Post	$ 62,100
Good Housekeeping	27,000
Collier's	24,000
Woman's Home Companion	21,850
Better Homes & Gardens	19,200
McCall's	19,200
American	14,000
Ladies' Home Journal	11,250
Total	**$198,600**

Electrolux

Electrolux Refrigerator Sales, Inc.

Saturday Evening Post	$ 62,100
Collier's	33,000
Good Housekeeping	23,600
Liberty	16,000
American	13,500
Cosmopolitan	12,600
Better Homes & Gardens	12,150
Time	10,500
Farmer's Wife	3,400
Total	**$186,850**

Crosley

Crosley Radio Corp.

American Weekly	19,060
Saturday Evening Post	13,462
McCall's	11,198
Good Housekeeping	11,052
Time	6,528
Liberty	3,600
Collier's	3,060
Ladies' Home Journal	2,916
Woman's Home Companion	2,775
American	2,376
True Story	2,376
Cosmopolitan	2,322
Pictorial Review	2,160
Better Homes & Gardens	2,052
Literary Digest	1,980
Household Magazine	1,890
National Geographic	1,854
Delineator	1,728
New Yorker (National)	1,675
Woman's World	1,231
Redbook	900
American Home	843
Needlecraft	822
Vogue	818
Popular Mechanics	675
House & Garden	600
Popular Science Monthly	540
House Beautiful	552
Motion Picture Unit	507
Holland	432
Harper's Bazaar	370
Christian Herald	324
Scientific American	150
Total	**$102,828**

Norge

Norge Corp.

Saturday Evening Post	$ 63,450
Good Housekeeping	37,600
Forbes	600
Total	**$101,650**

Leonard

Leonard Refrigerator Co.

Saturday Evening Post	$ 36,000
Woman's Home Companion	28,875
Collier's	16,500
Good Housekeeping	15,500
Total	**$ 96,875**

Grunow

General Household Utilities Co.

Saturday Evening Post	$ 86,400

Fairbanks-Morse

Fairbanks-Morse Home Appliances, Inc.

Saturday Evening Post	$ 36,000

Hotpoint

General Electric Co., Hotpoint Refrigeration Division

Saturday Evening Post	$ 21,600

Sparton

Sparks-Withington Co.

Good Housekeeping	$ 2,000
Grand Total	**$1,793,844**

Exports of Electric Refrigerators

June, 1935, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators Number	Electric Household Refrigerators Value	Electric Commercial Refrigerators Up to 1 Ton Number	Electric Commercial Refrigerators Up to 1 Ton Value	Parts for Electric Refrigerators Value
Austria	14	$ 1,011	12	$ 955	$ 716
Belgium	432	39,073	72	5,867	8,485
Bulgaria	9	612	...	...	...
Czechoslovakia	44	2,501	...	...	3,883
Denmark	...	...	...	...	200
Finland	17	1,158	14	1,342	1,993
France	604	43,936	73	5,917	58,584
Germany	12	774	...	...	8,162
Gibraltar	18	1,313	...	...	...
Greece	95	10,446	...	...	165
Irish Free State	48	4,677	3	975	1,707
Italy	199	17,198	67	4,478	8,388
Malta, Gozo, and Cyprus	7	602	1	112	83
Netherlands	235	16,312	73	7,371	7,527
Norway	124	9,446	17	1,876	3,146
Poland and Danzig	3	284	2	235	124
Portugal	20	1,804	5	612	230
Rumania	1	120	...	...	...
U.S.S.R. (Russia, Europe and Asia)	2	300	...	...	...
Spain	414	30,239	46	4,266	9,099
Sweden	434	32,094	175	15,096	12,981
Switzerland	93	6,284	1	588	9,911
United Kingdom	649	53,831	579	30,637	24,456
Yugoslavia	6	381	...	...	750
Canada	451	21,280	111	11,507	53,674
Costa Rica	7	590	...	...	79
Guatemala	28	2,342	...	...	16
Honduras	8	817	...	...	198
Nicaragua	3	90	...	...	...
Panama	63	6,291	11	3,217	1,093
Salvador	10	810	2	602	...
Mexico	520	45,092	30	3,848	7,246
Newfoundland and Labrador	11	1,042	1	400	1
Bermuda	12	1,487	1	211	301
Barbados	2	160	...	...	10
Jamaica	7	1,151	...	...	47
Trinidad and Tobago	25	2,191	...	...	34
Other British West Indies	5	350	1	300	105
Cuba	248	20,848	113	13,581	11,726
Dominican Republic	7	577	...	...	16
Netherland West Indies	64	7,307	2	442	241
French West Indies	13	1,387	...	...	108
Haiti, Republic of	5	346	1	164	252
Argentina	317	18,254	40	4,756	7,758
Bolivia	1	157	...	...	...
Brazil	286	25,241	38	3,723	5,032
Chile	71	4,913	...	...	90
Colombia	152	12,368	6	1,205	1,676
Ecuador	17	1,809	2	259	129
British Guiana	16	1,115	...	...	28
Surinam	9	1,184	...	...	...
Peru	32	3,313	...	...	371
Uruguay	30	2,046	...	...	587
Venezuela	191	19,478	2	197	429
Aden	...	...	...	...	10
British India	185	16,633	5	495	8,173
British Malaya	135	13,602	4	230	1,530
Ceylon	8	537	...	...	587
China	147	15,567	16	2,372	2,640
Netherland India	177	17,089	4	906	3,087
French Indo-China	137	11,918	1	133	2,053
Hong Kong	151	11,325	6	350	1,286
Japan	1	115	1	261	8,204
Kwantung	141	11,923	2	1,250	1,658
Palestine	439	28,755	66	6,262	10,387
Iraq	...	...	...	...	950
Philippine Islands	156	17,701	5	662	973
Siam	10	899	1	806	...
Syria	47	3,965	4	1,109	160
Turkey	522	41,260	29	4,450	979
Other Asia	...	...	...	...	22
Australia	414	32,344	1	240	17,066
French Oceania	18	1,434	...	...	54
New Zealand	42	3,988	6	528	1,028
Belgian Congo	40	4,963	...	...	88
British East Africa	20	2,561	...	...	8
Union of South Africa	382	33,232	32	2,988	16,227
Gold Coast	3	276	...	...	95
Nigeria	3	297	...	...	28
Egypt	65	6,650	1	166	366
Algeria and Tunisia	264	19,541	14	1,443	2,087
Madagascar	18	1,411	...	...	39
Other French Africa	33	3,635	10	1,150	494
Italian Africa	22	1,886	...	...	...
Morocco	117	9,672	1	173	1,575
Mozambique	12	1,095	20	1,897	...
Other Portuguese Africa	2	200	...	...	...
Canary Islands	46	4,082	1	84	95
Other Spanish Africa	25	1,803	...	...	10
Total	**9,873**	**$798,791**	**1,731**	**$152,694**	**$333,796**
Shipments to Hawaii	463	54,838	26	3,841	5,566
Puerto Rico	326	30,159	23	4,313	2,993
Virgin Islands	2	349	2	530	1

Argentina Puts Duty On Compressors

BUENOS AIRES, Argentina—Compressors for electric refrigerators now are dutiable under the tariff item covering "automatic refrigerators, complete or not, with or without condenser," according to a decision of the Argentine customs authorities, effective July 25, reports U. S. Commercial Attache Alexander V. Dye.

The ruling subjects compressors to a tariff of 40 per cent, plus a surtax of 17 per cent of an official customs valuation of 1 gold peso per gross kilo. Previously, compressors had been dutiable as "compressors of iron (for air pumps or refrigeration)," at 25 per cent, plus a surtax of 17 per cent of an official customs valuation of 0.50 gold peso per kilo.

Feir to Manage Branches Of Marshall-Wells Co.

PORTLAND, Ore. — James Feir, formerly manager of the Marshall-Wells Co., Duluth, has been appointed manager of the Portland and Seattle branches of this firm. He replaces George Young, who resigned his managership to become general supervisor of buying for Montgomery Ward & Co., Chicago.

4 Dealers Appointed by B. & O. Radio, Inc.

NEWARK—Four new dealers recently appointed by B. & O. Radio, Inc., Norge distributor for this territory, are Hahne & Co., Newark department store; Jackson Bros., Jersey City; Electrical Shop, Summit; and Edward De Wolf, Washington.

Economy Purchase Plan Adopted by West Penn Sales Organization

PITTSBURGH—Main wedge in the electric range and water heater promotional campaign being pushed by the West Penn Co.'s selling forces, is the "Economy Purchase Plan," which makes ownership of these appliances possible with payments as low as $4.15 a month, compared with $5.25, the previous lowest price instalment quoted by this utility.

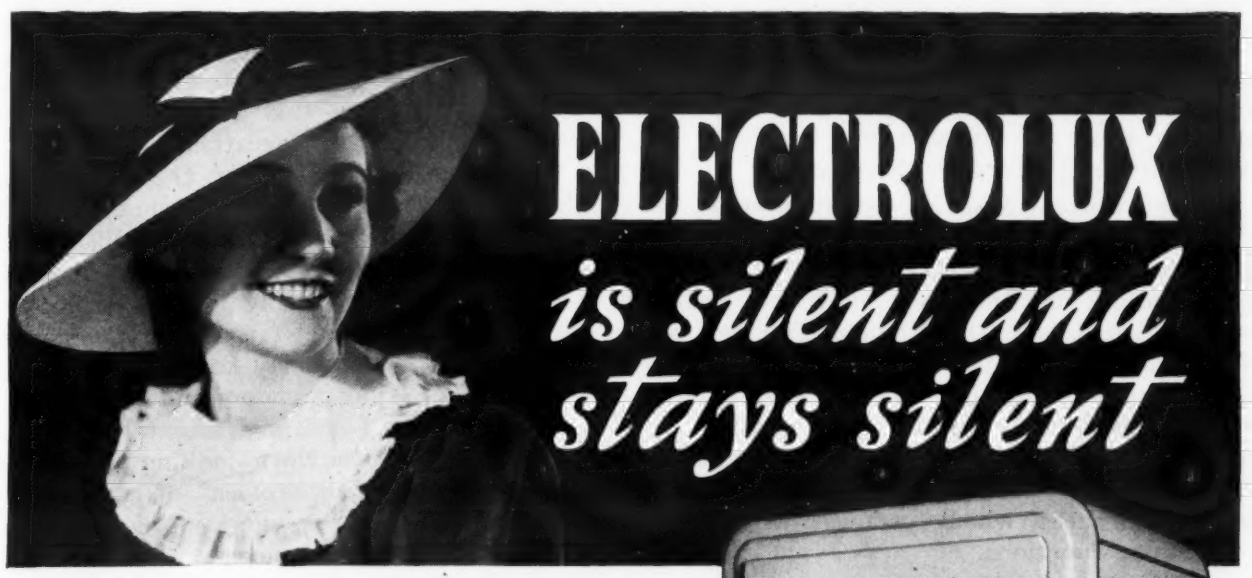
Carrying charges, formerly a barrier to volume sales, have been reduced. Customers may have payments extended over a longer period of months than previously.

275 Dealers Attend Gambill Meeting

NASHVILLE, Tenn.—275 dealers and salesmen attended the two-day meeting at the Andrew Jackson hotel held here recently by the Gambill Distributing Co., Crosley distributor for this territory.

Speakers at the sessions included Wheless Gambill, Jr.; George H. Lasley, southern district manager for Crosley Radio Corp., Cincinnati; H. E. Richardson, general sales manager for Crosley Radio Corp., Cincinnati; E. L. Winn, Federal Housing Administration; E. D. Pulliam, Louisville; Leslie Wood; and Dan Maddox.

Crosley refrigerators were displayed in actual operation, and visitors were invited to sample the desserts produced. The entire radio line was exhibited and described by factory representatives. Artists from WSM and WLAC entertained in the dining room.



ELECTROLUX *is silent and stays silent*

BONDERIZING *preserves the Finish*

Plus the many modern conveniences found in the 1935 Electrolux refrigerator is the outstanding quality of *"Silence."*

Skilled artists, engineers and practical women have combined their talents in designing a unit that incorporates the highest efficiency with great beauty.

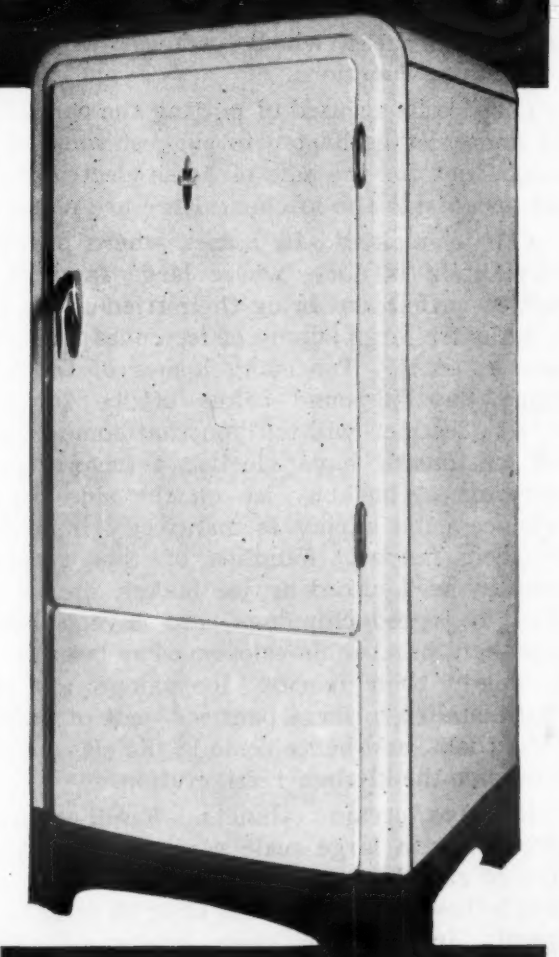
Protecting this beauty of line and color is an unseen quality that gives longer life to the finish. Before the cabinets are enameled they are Bonderized, providing a rust preventive base for the final finish. Bonderizing helps to maintain that original brilliance and color so important to the immaculate kitchen. It prevents finish checking and peeling and stops the development of rust around scratch or dent.

The customer will be glad to know that your refrigerator is Bonderized. It is a good sales point. Use it.

PARKER RUST-PROOF COMPANY
2197 E. Milwaukee Avenue • Detroit, Michigan

What the refrigerator salesman should know about Bonderizing is contained in a new book describing the process. It illustrates the results of laboratory tests on various finishing methods and shows why Bonderizing "Holds paint to steel". Send for your copy.

PARKER RUST-PROOFING *processes*



ANOTHER STEP AHEAD
BEAUTY THAT LASTS

USES NO WATER

ELECTRIC REFRIGERATION NEWS

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Member, Audit Bureau of Circulations
Member, Associated Business Papers
Member, Periodical Publishers Institute

VOL. 16, NO. 3, SERIAL NO. 339, SEPT. 18, 1935

Come Out of the Kitchen

TODAY much emphasis is being laid on the all-electric kitchen. *Ensemble selling,* as the joint merchandising of refrigerator, range, and dishwasher has come to be known, is receiving the benefit of the best thinking, planning, and promotion that can be bestowed upon it by the major manufacturers of electrical household appliances. Undoubtedly this effort is going to result in a trend toward the buying of kitchen appliances as matched units; and the trend is one all alert distributing organizations will be quick to sense the advantages of, and to get their share of the profits therefrom.

In the concentration of attention upon the kitchen, however, it is to be hoped that salesmen and salesmanagers will not entirely overlook the opportunities for the sale of home electric refrigeration *outside* the kitchen. This fall and winter should be a good time for many good salesmen to look into this neglected field, because many hitherto active competitors will be out gunning for sales of the new metal-tubed radios, or talking to prospects for improved oil burners and oil furnaces which perform winter air-conditioning functions.

Lest we be accused of putting the cart before the horse, let us hasten to suggest some of the possibilities for the sale of home electric refrigeration *outside* the kitchen. Here are a few:

(1) Ice-makers. In homes where plenty of entertaining is done, where large families are wont to gather and bring their friends, the need for an extra-large supply of ice cubes frequently becomes acute. Too many homes of this class simply buy 50-pound cakes of ice for their parties (ice men will tell you that some of their best customers have electric refrigerators in their homes, but buy ice on the side because their ice cube supply is manifestly inadequate for their needs). Families of this type can generally well afford an ice maker, prefer neat cubes to jagged chippings, and haven't bought ice makers because no salesman has been around to explain their merits. Ice-makers are most often installed in large pantries—out of the way of the cooks, and hence come in the classification of outside-the-kitchen refrigeration.

(2) Ice cream cabinets. Families which entertain on a large scale rarely have refrigerators of sufficient capacity for their needs, even though they may have boxes of 9, 10 or 12 cu. ft. capacity installed in their kitchens. Adding another household refrigerator in such cases frequently is considered out of the question because of space limitations in the kitchen. One exceedingly clever answer to this dilemma is the installation of an ice cream cabinet in the basement. Therein may be stored meats and vegetables purchased in quantities to effect savings, and to provide against the unexpected arrival of guests. Moreover, larger cuts of meat may be bought and stored than could be accommodated by most household refrigerators. Kept at proper temperatures, this meat may be allowed to age and achieve a tenderness which will bring culinary fame to the host and hostess.

(3) Beer coolers and refrigerated bars. In most of the new homes now being erected by speculative builders, a private bar seems to be an accepted feature. Electric refrigeration is a virtual necessity for the maintenance of proper temperatures for beer—a fact which makes it possible for this industry's salesmen to invade an almost virgin field.

(4) Portable refrigerated bars. This is an item which has been marketed by comparatively few manufacturers, and which, despite its obvious appeal for the luxury market, has not been sold in appreciable quantities. With the coming of better times, the dolled-up 3-cu. ft. refrigerator on casters (equipped with ice cube trays, paraphernalia for serving cocktails, and bottle storage facilities) should respond to sales effort in a more satisfactory manner—providing it gets proper promotion and sales effort.

(5) Florist refrigeration. Commercial vendors of flowers are not the only people who have need of florist refrigeration equipment. In some of the bigger homes a fresh supply of flowers becomes almost a daily necessity, like a daily supply of fresh food. Families in the upper income brackets generally have their own gardens—extensive ones, too—and in many cases it can be demonstrated to them that the installation of florist refrigeration equipment will actually save them money, in addition to making available at all times a supply of flowers from their *personal* gardens.

Smart salesmen will no doubt be able to think of other possibilities of selling outside-the-kitchen refrigeration equipment to big homes in which such equipment can be justified.

One problem in this connection which will probably present itself almost at once to salesmanagers who give these suggestions some thought will be that of deciding who shall attempt to cultivate this relatively untouched market. Household refrigeration salesmen would be handicapped; first, because they are usually unfamiliar with commercial refrigeration equipment and what it will do, and second, because for the last few years they have been talking to families of considerably lower income than those which this market represents. Commercial refrigeration salesmen may know the equipment better, but often don't understand the problems of selling to the home, and might feel uncomfortably out-of-place when making their calls.

The answer to this problem, of course, is an individual one: salesmanagers must first choose with some care the salesmen assigned to these prospects, and then help work out a new sales procedure and presentation for them.

Installations of this type should be highly profitable. And inasmuch as they represent a *plus* business which many dealers will not have been counting on, they should add some highly pleasing figures to the year's balance sheets of sales organizations which make an intelligent and persevering effort to go after this kind of business.

WHAT OTHERS SAY

Business Papers and Politics

A VALUED subscriber presents this question: "Is it the policy of *Advertising Age* to take sides on politico-economic questions that importantly affect large portions of our national population?"

Our answer is that if political action affects marketing and advertising, it is our duty to express our opinion, if we have one, and it may be added that business papers should be qualified to have definite opinions on the subjects which affect the interests of those to whose service they are devoted.

Politics in the partisan sense should not be the concern of business publications; but politics in the broad sense of governmental activities should concern business papers to the extent that these activities affect business. At present government is concerning itself with business to a greater degree than ever before, and is introducing new economic policies as a basis for political action. Obviously these policies are of great importance to business, to advertisers, and to the public, and it is for that reason that *Advertising Age* has discussed them.

We feel that business men have a right to look to the business press for informed and intelligent discussion of public questions which affect their interests. There are some business publications of a highly technical character, whose readers are more interested in their interpretation of engineering and related subjects than those of an economic character; but they are in the minority.

Today's contacts between politics and business involve so many fundamental questions, affecting all kinds of business activities, that business papers must be prepared to deal with them. That, at all events, is the policy of *Advertising Age.—Advertising Age.*

LETTERS

Circulation Analysis

Leo Burnett Co., Inc.
Advertising
360 N. Michigan Ave., at Wacker Dr.
Chicago

Editor:

It is very important that I receive information about your publication. I should like two circulation breakdowns, one based upon population and the other based upon trade. In the population breakdown, I should like to find out what proportion of your circulation goes to cities of:

Under 5,000
5,000 to 10,000
10,000 to 25,000
25,000 to 50,000 and
Over 100,000, etc.

In the trade breakdown, I should like the dealer types that the magazine goes to. That is, what part of the circulation goes to hardware stores, furniture stores, electrical stores, etc.

Thanking you in advance for your prompt attention to this request, I am,

F. STROTHER CARY.

Answer: ELECTRIC REFRIGERATION NEWS is a member of the Audit Bureau of Circulations and as such, furnishes the detailed analysis of circulation adopted and approved by the Bureau. The matter of record-keeping necessary to meet the requirements of the Bureau is no small problem and it has been our feeling that we cannot add to this burden.

We receive many other requests for special breakdowns of circulation and if it is true that the ABC analysis does not meet the requirements of our advertisers, then we believe that the ABC should be dropped in favor of some plan which will give the desired information. In other words, it does not appear possible to do *both* and we believe that a choice is necessary.

Referring to your request for an analysis of the circulation into such classifications as hardware stores, furniture stores, electrical stores, etc., it is not so easy for us to obtain this information as one might suppose. Most readers of ELECTRIC REFRIGERATION NEWS are primarily in the *refrigeration* business. Stores which merely handle a few refrigerators as an item of stock are not numerous on our list. In the case of a refrigeration department which may be connected with a larger store, the subscriber is usually the manager of that department or some sort of a specialist in refrigeration and, therefore, does not consider himself a hardware man, furniture man, etc.

Another difficulty in getting that type of information is due to the circulation methods of the ELECTRIC REFRIGERATION NEWS. *We employ no solicitors to call on the dealer and send in the desired information.* All of our subscriptions are received by mail and, with the exception of a small number coming through magazine agencies, we obtain the full subscription price. This is a very unusual situation as you may know, if you are familiar with circulation methods generally used. In other words, ELECTRIC REFRIGERATION NEWS is bought by (rather than sold to) companies and individuals who are willing to take the trouble to send in their order with checks attached. Thus the circulation of ELECTRIC REFRIGERATION NEWS represents a self-selected group of readers.

From a statistical viewpoint our system is not so good. Considered in terms of reader interest and confidence in the paper, the plan is a humdinger.

Jobbers to Sell the News

Parks & Hull Appliance Corp.
Distributors
Westinghouse Electric Refrigerators
and Household Appliances
1035 Cathedral St., Baltimore

Publisher:

We are definitely interested in your proposal to appoint jobbers as authorized local agents for your publications.

We are subscribers to your paper and have greatly enjoyed and profited by passing it to the various members of our organization. We feel that the information contained in your paper is information that cannot be obtained as cheaply in any other way and that every man in the refrigeration business should be a subscriber.

This is particularly true in view of the technical service information that is being published in the various issues.

We are completely sold on your paper, as well as the DIRECTORY AND MARKET DATA BOOK, and will be interested in your advising us the complete details by which we can offer it to our refrigeration trade customers.

We will appreciate your advising if your jobbers plan grants an exclusive agency to the jobber in his territory.

GEORGE J. ROCHE,
Treasurer.

Answer: The plan for appointment of jobbers as authorized agents for the NEWS does not permit the granting of exclusive territory.

Samples Snapped Up

D. C. Lingo Co.
Wholesale Refrigeration Equipment
Machinery Supplies
306 M. & M. Bldg., Houston, Tex.

Publisher:

This is replying to your letter dated July 26, relative to the distribution of sample copies of the ELECTRIC REFRIGERATION NEWS and also the handling of subscriptions by jobbers.

While the free sample copies that you have sent me, have been snapped up quickly, up to this time I have not been able to get any subscriptions.

However, I think there will be a few of the wider awake service companies subscribing, which may be a satisfactory way of getting your publication right into the hands of those most vitally interested.

I am in for anything that will educate the service man, that will keep him abreast of the times. This refrigeration service business is an infant industry and it will take a great deal of education to get the service trade in a position of consideration and importance among other industries.

I shall be glad to help in any way in the distribution of your paper and hope to be able to send you in a few subscriptions soon.

Your attempt to give the service man a paper full of interest and education is well taken and you can count on my assistance in this territory.

D. C. LINGO.

Clipped to Pieces

Air Conditioning Manufacturers' Association
Washington, D. C.

Editor:

I would appreciate your sending me another copy of the Sept. 11 issue. We have clipped so many interesting items from that issue to send to various of our friends that there is very little left of our regular copy.

WILLIAM B. HENDERSON.

What's Your Slogan?

Dodd, Mead & Co.
449 Fourth Ave., New York

Editor:

Burton Stevenson's *Home Book of Quotations,* published late last November, is already going into a third printing. In this new edition we plan the inclusion of an entire new section of advertising slogans ("Eventually, why not now?" "Ask the man who owns one," etc.), including not only the slogan itself but information as to its origin, its author, its first appearance, the product it advertises, etc.

It is hoped that this section will constitute an accurate and comprehensive unofficial registry of advertising slogans and trade mottoes, but its completeness, of course, will depend upon the cooperation of the manufacturers of the products which the slogans advertise.

We should appreciate your assistance in collecting this material and we should be glad to have you send directly to Burton Stevenson, at Chillicothe, Ohio, accurate and complete information on the origin, exact phrasing, evolution, and other pertinent details of well-known advertising slogans, etc. We do not wish to overlook anyone in this listing, and hope you will find it possible to run a notice of this in the next issue of your paper.

R. T. BOND.

'Alphabet Confusion'

Perfection Mattress & Spring Co.
Distributor Crosley Radios and
Refrigerators
831 North 24th St., Birmingham

Editor:

Many thanks for your letter giving me more information about your camera.

We have had a very nice refrigerator business this year, selling some 1,200 or more boxes in north Alabama. However, the cool spell in August, and the confusion in the different financing methods of FHA, EPP, CIT, and all the other alphabets, has slowed business up considerably. We expect to sell possibly 100 more between now and the first of the year. The radio season is opening up nicely, and we hope to have a very good year in this department.

F. M. JACKSON, JR.,
President.

'A Gap in My Files'

P. O. Box 133
New Bedford, Mass.

Editor:

Have not received my Sept. 4 copy of the ELECTRIC REFRIGERATION NEWS. Hate to miss a copy, and there would be a gap in my files. Kindly see that this is taken care of at your convenience.

R. G. O'BRIEN.

"Please enter my subscription for one year to the NEWS. I would like all the back service data you have published as I am one of the instructors in refrigeration service at Seneca Evening Vocational High School. This information should be of great help to me."—Milton F. Boneberg, 67 Peach St., Buffalo, N. Y.

for the parts manufacturer's note pad—

— responsible buyers cannot risk unknown products in making their purchases.

— the refrigerator manufacturer, facing sharp competition, is doubly careful to select parts and materials of known merit.

— jobbers of replacement parts and supplies, now choosing their sources of supply for next season, prefer to handle widely-known brands.

— in a fast moving industry, and with the approach of the new season, engineers and production executives must make their decisions rapidly—on the basis of all the facts immediately available.

— by focusing attention on parts, materials, and supplies just at the time when this information is needed most, ELECTRIC REFRIGERATION NEWS offers the effective approach to this potential market.

Submit full details about your products in the

October 9 issue of the News

featuring

Motors and Controls

Survey of other coming issues to feature parts, materials, and supplies, with emphasis on new developments and on servicing:

September 25—Valves and Fittings

Progress in the design and applications of valves and fittings will be discussed in this issue, with particular emphasis on new developments now introduced on the market. Advertising forms close Sept. 21.

Oct. 2—Condensing Units and Parts

This issue will cover complete condensing units available for assembly of 1936 household electric refrigerator models, and will afford a "preview" of 1936 commercial refrigeration machines. Also to be given consideration are new developments in compressor parts, condensers, refrigerants, and compressor oils.

Oct. 16—Cabinets and Cabinet Parts

New styles in cabinet design and construction will be described and illustrated in this issue, and the editorial spotlight will be focussed on cabinet finishes, insulation, gaskets, breaker strips, shelves, and nameplates.

Oct. 23—Installation and Service Tools

Service and installation men are constantly on the lookout for new tools and equipment which will enable them to do a better job and with less time and effort. The Nov. 7 issue will describe the design and application of newly developed instruments manufactured particularly for use by the refrigeration service man.

Oct. 30—Evaporators

This issue will deal with new developments in evaporators for both household and commercial applications. Other parts designated for special attention in this issue are ice cube trays, and ice cube tray accessories.

Nov. 6—Refrigerator Accessories

Accessory items for use with household electric refrigerators have become increasingly important in the past few years, and this issue will tell what's going to be available for the "inside" of 1936 models.

BUSINESS NEWS PUBLISHING CO. 5229 CASS AVE. DETROIT, MICH.

AIR CONDITIONING

Topics Selected for A.S.H.V.E. Meeting

(Concluded from Page 1, Column 1)

concrete, heat transfer of fin tubing, and corrosion in steam return lines.

The National Warm Air Heating and Air Conditioning Association will meet at the same time.

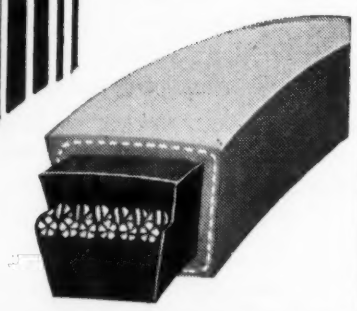
Advisory committee for the exposition is as follows:

John Howatt, chairman, Chicago Board of Education; John M. Frank, Ilg Electric Ventilating Co.; F. H. Gaylord, Hoffman Specialty Co.; R. E. Hattis, consulting engineer; A. B. Martin, Kewanee Boiler Co.; E. M. Mittendorf, Sarco Co.; J. R. Vernon, Johnson Service Co.

A cooperating committee of representatives from allied organizations is comprised of the following:

J. J. Donovan, American Oil Burner Association; J. L. Harpham, National Association of Air Filter Manufacturers; N. T. Sellman, American Gas Association; S. C. Bloom, American Society of Refrigerating Engineers; J. C. Matchett, Steam Heating Equipment Manufacturers Association; G. H. Dickerson, Heating, Piping & Air Conditioning Contractors National Association; R. W. Blanchard, Register & Grille Manufacturers Association; H. T. Richardson, National Warm Air Heating & Air Conditioning Association; Homer Addams, Steel Heating Boiler Institute; J. R. Whitehead, Stoker Manufacturers Association; and E. W. Smith, Institute of Boiler & Radiator Manufacturers.

MAXIMUM RESISTANCE TO STRUCTURAL BREAKDOWN



MANHATTAN V-BELTS

for Fractional Horsepower Service are designed to eliminate internal heat. Each component part of the belt structure is insulated with a thickness of rubber. . . . Rubber holds together and at the same time cushions each cord in the whipcord strength member. Thus chafing which generates the most internal heat is made impossible. Greatly increased belt life is an unavoidable result. To eliminate noise — Specify Manhattan. . . . A trial will convince you.

For complete literature, write the factory or any of the following Sales Branches:

Birmingham Cleveland New Orleans
Boston Detroit New York
Chicago Minneapolis Philadelphia
Pittsburgh St. Louis

THE MANHATTAN RUBBER MFG. DIVISION
of Raybestos-Manhattan, Inc.
Executive Offices and Factories
45 TOWNSEND ST., PASSAIC, N. J.

Air-Conditioning Sales In Houston Near '34 Record

(Concluded from Page 1, Column 2)

tioning installations is the fact that several fields were entered which were not touched in years prior to 1935. This year two private offices (totaling 8.25 hp.), two hotels (totaling 325 hp.), one department store (405 hp.), one club (19.5 hp.), and one hospital (18 hp.) were air conditioned as compared with no installations of this type in previous years.

Also interesting to note is the fact that air-conditioning equipment installed in two miscellaneous stores this year totaled 283.5 hp. as compared with the same number of stores air conditioned previously, totaling only 22 hp.

Residential air conditioning more than held its own with four installations in the first eight months of the year as against a total of six for the whole of 1934 and a total of seven in all years previous.

Only three offices were air conditioned this year, bringing the total number of air-conditioned offices in the city to 20, but the horsepower for the three offices totaled 65.6 as compared with 130.5 for the other 17. The office classification does not include figures for office buildings or private offices.

Houston now has nine air-conditioned theaters, two of which installed equipment totaling 283.5 hp. this year. One 112-hp. theater installation was made last year, and the other six were made in years prior to 1934.

Other installations made this year include one barber shop (6.5 hp.), two restaurants (totaling 38.5 hp.), and two shoe stores (totaling 14.9 hp.).

That the average horsepower per installation is larger this year than last year is indicated by the following tabulation which gives the number of installations and average horsepower for before 1934, during 1934, and the first eight months of 1935:

	No. of Installations	Total Hp.	Average Hp. Per Installation
Before 1934....	31	3,537.6	114.11
During 1934....	33	648.9	19.66
First 8 Months of 1935	27	2,288.1	84.74

9 Installations Made In Milwaukee

(Concluded from Page 1, Column 4)

was in apparel shops, where four installations, totaling 92 hp., brought the figure for all years to five.

Largest single installation in the city was in an office building, where a system of 69 hp. was put in operation. Other applications included one of 8 hp. in a merchandising building, one of 10 hp. in a restaurant, one of 3 hp. in a tavern, and one industrial job of 4 hp.

No residential installations were reported during the first half of the year, and other fields were similarly quiet.

A possible explanation of the city's lag in the early part of 1935 is that cold weather continued in the Milwaukee territory until early May, discouraging many merchants and homeowners who might otherwise have been early buyers of air-conditioning equipment.

That this supposition is true, at least in part, is evidenced by the comparatively large horsepower load which has been contracted for, but not installed, by the time the six months' report was made.

Carrier Makes Picture For Air-Cooled Shows

NEWARK—As an attention-getter for motion picture houses using its cooling installations, Carrier Engineering Corp. here, manufacturer of theater air-conditioning equipment, has developed a 100-ft. trailer by which each motion picture house can present to its patrons facts about its cooling system.

Featuring the point that equipment used in the theater is similar to that providing comfort in the Paramount theater and Radio City Music Hall in New York City, the White House, the *S. S. Normandie,* etc., the trailer runs one minute and a half, with music. Fifty prints are available, prepared and distributed by National Screen Service, Inc., New York City.

M. Brazee, manager of the Avalon theater, Chicago, describes the trailer as "perfectly worded and a 100 per cent attention-getter."

22 Winners Listed For Westinghouse Mobilaire Contest

MANSFIELD—Names of the 22 winners in the "Mobilaire" air-conditioning sales contest sponsored by the Westinghouse Electric & Mfg. Co., held from March 15 to Aug. 15, were announced last week by S. F. Myers, manager of air-conditioning sales.

"While the sales in the contest were limited, for prize consideration, to the Mobilaire self-contained room coolers, salesmen reported sales of other types of equipment to prospects they found during the campaign," Mr. Myers reports.

Eight first prizes were awarded to the men reporting the greatest number of sales in each of the eight Westinghouse territories. Remainder of prizes were distributed among the 14 second and third place winners. Those receiving prizes sold more than 200 units in the contest. Winners were:

New England district: R. L. Smith, Buckley & Scott Utilities Co., Boston.

Eastern district: first prize—I. B. Coe, Blower Systems Corp., Rochester, N. Y.; second prize—A. J. Brophy, The Abbott Co., Newark; third prize—J. A. Smith, Lawrence Sonneborn, and W. O. Gilboy, The Abbott Co., New York City.

Middle Atlantic district: first prize—A. E. Beitzell, Combustioneer Stoker Corp., Washington, D. C.; second prize—N. V. Nininger, Oil Burners & Air Conditioning Corp., Roanoke, Va.; third prize—H. A. Winans, Eugene P. Kiehl, Philadelphia.

Southeastern district: first prize—J. W. Davis, Equitable Equipment Co., New Orleans; second prize—John Ingram, Southern Specialty & Fixture Co., Savannah, Ga.

Central district: first prize—W. C. Sutherland, Danforth Co., Pittsburgh; second prize—E. R. Keagy, W. D. Callan Co., Norwood, Ohio; third prize—H. K. Hall, Danforth Refrigeration Co., Cleveland, and F. T. Deters, Aetna Oil Service Co., Louisville, Ky.

Northwestern district: first prize—H. A. Stade, Kroeschell Engineering Co., Chicago; second prize—A. G. Schwab, Hyland Electric Supply, Chicago; third prize—Tom Carey, Hyland Electric Supply, Chicago.

Southwestern district: first prize—S. J. Shure, Natkin & Co., St. Louis; second prize—Henry Gould, Natkin & Co., Kansas City; third prize—Henry Kleinkauf, Natkin & Co., Wichita.

Pacific Coast: first prize—Arnold H. Clausen, Edw. B. Ward Co., San Francisco; second prize—P. N. Harrison, Edw. B. Ward & Co., San Francisco; third prize—Daniel Palmiter, Edw. B. Ward & Co., Sacramento.

Miner Heads Conditioning Sales for 555, Inc.

LITTLE ROCK, Ark.—Philip T. Miner has been appointed manager of Kelvinator commercial refrigeration and air-conditioning departments of 555, Inc., distributor here.

This Installation Sold Hotel on Air Conditioning

Col. Seymour Weiss, president and managing director of the Roosevelt hotel, New Orleans, in his air-conditioned office. So impressed was Col. Seymour with the operation of these units that he has now air conditioned many other parts of the hotel, including 113 guest rooms.

* * *

New Orleans Hotel Air Conditioned by Progressive Steps in Past 3 Years

NEW ORLEANS—Convinced, by a three-year study, that air conditioning means increased business for hotels in this humid zone, Col. Seymour Weiss, managing director of Hotel Roosevelt here, contracted for complete summer conditioning of 113 guest rooms.

Col. Weiss, a close associate of the late Huey Long, is being prominently mentioned as a successor to the "Kingfish" as the leader of the dominant Louisiana political organization.

As far back as 1932, Mr. Weiss had his private office in the hotel air conditioned. Successively, similar equipment was installed in the hotel's dining room, coffee shop, lobby, bar, barber shop, meeting rooms, and in the Roosevelt night club, one of the south's best.

Sufficient time elapsed between each application to give the equipment opportunity to demonstrate itself as a sound investment. So the conditioning of the guest rooms is, after all, just another step in the hotel's policy of making air conditioning pay for itself.

All of the equipment was purchased through the New Orleans branch of Frigidaire Corp.

Design of the system used in the guest rooms is of the multiple type. Each of the conditioned rooms is equipped with a unit conditioner, finished to match the furnishings, and which contains the necessary equipment for cooling and dehumidifying.

For positive circulation of conditioned air throughout the room, the unit contains a specially designed, concealed fan, which can be operated at either of two speeds, according to the desires of the guest, or can be operated without the mechanical cooling during those periods when such might be desirable.

In addition, each room unit has a selective thermostat, permitting the guest to set it at whatever room temperature he feels is most desirable. These units, in reality small distributors of refrigeration, receive their refrigeration power in turn through the small copper lines that carry back to a series of powerful refrigerating compressors, located at strategic points throughout the building.

The 113 rooms now conditioned are spread out over a number of floors, partly as a matter of convenience and practicability in installing, and partly as a matter of hotel policy. In making the installations, the work was planned so that groups of 18 or 20 rooms could be cut in as soon as ready, instead of having to wait for the entire installation to be completed.

Rooms were sold almost as quickly as they were conditioned, Mr. Weiss reports. If the demand continues to increase, he says, additional installations will be made in the same manner as before—a group at a time. Extensions can be run from the existing lines at any point, under the system worked out for the hotel by Frigidaire engineers.

Summary of Houston, Texas, Air-Cooling Jobs

Type of Establishment	Prior to 1935 No.	Prior to 1935 Hp.	During First 8 Months of 1935 No.	During First 8 Months of 1935 Hp.	Total No.	Total Hp.
Banks	3	445	..	..	3	445
Building & Loan	1	13	..	..	1	13
Barber Shops	1	15.5	1	6.5	2	22
Beauty Shops	1	16	..	..	1	16
Mortuaries	1	11.5	..	..	1	11.5
Offices	17	130.5	3	65.6	20	196.1
Office Buildings	1	715	..	..	1	715
Radio Studios	2	12	..	..	2	12
Residences	7	49.5	4	16.05	11	65.55
Cafeterias	4	483	..	..	4	483
Restaurants	4	107	2	38.5	6	145.5
Night Clubs	1	64	..	..	1	64
Clothing Stores	6	117.5	5	144.3	11	261.8
Shoe Stores	3	26	2	14.9	5	40.9
25 Cents to $1.00 Stores	1	153	..	..	1	153
Jewelry Stores	1	14	..	..	1	14
Miscellaneous Stores	2	22	..	..	2	22
Theaters	7	1,689	2	283.5	9	1,972.5
Electric Co. Sales Office	1	103	..	..	1	103
Private Offices	..	..	2	8.25	2	8.25
Hotels	..	..	2	325	2	325
Department Stores	..	..	1	405	1	405
Clubs	..	..	1	19.5	1	19.5
Hospitals	..	..	1	18	1	18
Buildings	..	..	1	943	1	943
Total	64	4,186.5	27	2,288.1	91	6,474.60

Air-Cooling Installations in Milwaukee, Wis.

Type of Establishment	Prior to 1935 No.	Prior to 1935 Hp.	First 6 Months, 1935 No.	First 6 Months, 1935 Hp.	Total No.	Total Hp.
Theaters	8	2,142	..	..	8	2,142
Office Buildings	1	530	1	69	2	599
Merchandising Buildings	..	..	1	8	1	8
Office Space	9	17	..	..	9	17
Private Offices	1	66	..	..	1	66
Hotels	1	88	..	..	1	88
Apparel Stores	1	3	4	92	5	95
Food Stores	2	11	..	..	2	11
Restaurants	4	110	1	10	5	120
Recreation	1	55	..	..	1	55
Taverns	2	14	1	3	3	17
Funeral Parlors	5	53	..	..	5	53
Banks	1	73	..	..	1	73
Brokerages	1	8	..	..	1	8
Residential	6	25	..	..	6	25
Industrial	6	129	1	4	7	133
Total	49	3,324	9	186	58	3,510

MASTER SERVICE MANUAL

Chapter 7—Installations

Instructions for Installing Electric Refrigerators

By K. M. Newcum

74. Installation of Refrigerators

Domestic or household electric refrigeration installations are generally divided into two classifications—self-contained and remote.

A self-contained installation is one where the condensing unit is installed in either the base or top of the cabinet and all parts of the system are thus self-contained. See Fig. 79, Chapter 4.

A remote installation is one where the condensing unit is installed in some remote place or otherwise not in the cabinet. The most common condensing unit location in a remote installation is in the basement. Fig. 124.

The earlier models of some manufacturers were self-contained, and the system was completely built-in, and charged with refrigerant and oil at the factory. Design of the units was such that in case of difficulty or improper operation, the entire assembly was returned to the factory for servicing.

Although most service problems should have been solved and repairs made in the field, service information and experience was lacking. This method proved very expensive and inconvenient.

Next step was to train installation men to properly install the evaporator and condensing unit, either as a self-contained or remote installation in the home. During the early period only cabinets manufactured by, or highly recommended by, the manufacturer were used for mechanical refrigeration.

During this period and up to a few years ago the large majority of installations were made in the home by assembling the three major parts, that is, the evaporator, condensing unit, and cabinet in the home. This work provided good training for a large number of men, who later branched out into commercial or multiple apartment installation work, or became service men.

Then the manufacturers began to assemble the system on the production lines in the factory in such a way that all parts were accessible for servicing in the home, so that any major part might be replaced. This materially cut down on the time required for installation, making the operation primarily setting the cabinet level in the proper place, opening the service shut-off valves, putting the system into operation, and instructing the user.

About this same time the hermetically sealed units made their debut, and their installation was even simpler, as there were no valves to open. Many household electric refrigerators are now installed by truckmen, and later checked for operation by a competent service man.

There are still many installations of units in regular refrigerators and in refrigerators originally designed for use with ice that require trained installation men. Good installations in many cases may be considered more important than service, on the theory that if the installation is correctly made, service difficulties will be reduced to a minimum.

Any person installing a refrigerator, whether it be hermetically sealed, or the so-called conventional type, should have a complete knowledge of the operation of the system and be trained to render service on it.

It is surprising the amount of expensive service time that is wasted in an attempt to make a system that was incorrectly installed, operate correctly, only to find in many cases that the installation must be corrected before the system will function normally.

As the great majority of household refrigeration systems use the air cooled condenser, it might be well at this point to review Paragraph 62 of Chapter 4 on condensers.

Good judgment in selecting the proper location for the cabinet and condensing unit is often of greatest importance. Very often the location is selected by the owner and the salesman, neither of whom may have the proper knowledge of the system to make the selection. In some cases the installation man may have to alter the original plans, and reasoning based on experience may have to be used.

A typical example of poor judgment is given to show how an improper installation may cause unnecessary service calls. A self-contained installation of a very high grade 9-cu. ft. refrigerator and a ¼-hp. twin-cylinder SO_2 condensing unit was made with the refrigerator recessed in a space especially built to accept the cabinet.

A space of about 2 inches was provided between the sides of the cabinet and the walls. About 3 inches was allowed at the top. The cabinet was on castors, which held it up about 2 inches from the floor.

An evaporator of the proper capacity was properly installed in the cabinet. The tubing was neatly run from the evaporator to the condensing unit. The condensing unit was properly placed in the base of the cabinet.

The machine compartment door was of the solid type, that is, it had no louvres or openings to provide air circulation through the front face of the machine compartment. The bottom and back of the machine compartment was open to allow for air circulation. Condenser was of the bare tubing type of ample size and capacity, and the motor pulley was equipped with a fan.

The installation was completed in the early fall of the year. It functioned satisfactorily, without any service attention, up to the time hot weather came along.

First service complaint was that the machine was running most all the time, the compressor was noisy, and the ice cubes were slow to freeze.

The service man making the call removed the machine compartment door and installed his gauges, and placed a thermometer in the refrigerator. He noticed the head pressure was high. He purged the condenser for air, slowly for a period of about 15 minutes.

When he put the system back into operation the head pressure came down to around normal, and the machine ran quietly. The service man left the job feeling that he had corrected the difficulty, and reported that the system had high head pressure, caused by air in the condenser.

The next day the user registered the same complaint again. Another service man took this call. He followed the same procedure as the first service man, purging the condenser, and leaving the job apparently working satisfactorily, considering that the weather was hot.

When the third service call came in from the same user, the service manager sent the head service man to completely check and correct the cause of this trouble. Being in a position to take the necessary time, before making any changes, he placed a thermometer in the refrigerator and found the temperature around 55° F., and the ice cubes not completely frozen.

He also noted that the motor and compressor were laboring. Realizing that it must not be air in the condenser, as this had been taken care of by the two preceding service men, he took into consideration the limited amount of space for air circulation, and decided to place the blame for faulty operation on restricted air circulation.

Upon removing the solid machine compartment door he noticed a sudden outpouring of hot air. He put both gauges on the machine, and placed a thermometer near the condenser. The machine compartment door was then put back into place, and the system was left to function for about an hour, with no apparent temperature drop in the refrigerator.

After an hour the machine compartment door was quickly removed and both the high and low pressure, and temperature of the air at the condenser were noted. The head pressure was up around 135 lbs., the back pressure was around 4 in. vacuum, and the temperature of the air at the condenser was about 125° F. The room temperature was 94° F.

The cause of the condition was obvious. With the restricted air circulation, the bulk of the heat dissipated by the condenser was trapped in the machine compartment, to result in a temperature of around 125° F. With the high condensing medium temperature the head pressure had increased to around 135 lbs.

At 135 lbs., the capacity of the condensing unit was so materially reduced that even with continuous operation it could not remove the heat from the refrigerator as rapidly as it was being introduced due to high room temperatures. This higher head pressure put an overload on the compressor and motor. The overload caused the condensing unit to vibrate excessively, which caused the noise.

There were three possible solutions. First, a machine compartment door having louvres of sufficient size to allow free circulation to the open room could have been installed in place of the solid door. Second, a section of the flooring the size of the opening in the bottom of the machine compartment could have been removed to allow the cool air of the basement to mix with hot air of the machine compartment. Third, the condensing unit could be removed from the machine compartment and installed in the cool basement, where free circulation of air would have been assured.

The user could not understand why the system would not function properly in its original position, as she had been assured at time of purchase and installation that the system had sufficient capacity, even under hot weather conditions. Permission was finally obtained to remove the compressor to the basement, where it functioned very satisfactorily without any additional service attention.

There are many cases of this type in operation and hot weather service calls are frequent. Different service men try various methods of making the job function even under these undesirable conditions.

Often many mechanical changes are made, refrigerant added or removed, throttle valves changed or readjusted, and other changes made depending on the diagnosis of the particular service man.

It has been found that in many of such cases that these experiments are continued on through the hot weather, and finally when cooler weather comes along the system returns to normal operation, merely due to lower room and condensing compartment temperatures.

Systems operating under restricted air circulation conditions are subject to very rapid wear and many mechanical complications. High head pressure results in very rapid wear on throttle valves (see paragraph 66, automatic expansion valves). The increased head pressure also results in greater wear on the compressor parts, the belt, and the motor. The wattage consumption of the motor is excessive under overload conditions.

Remote System

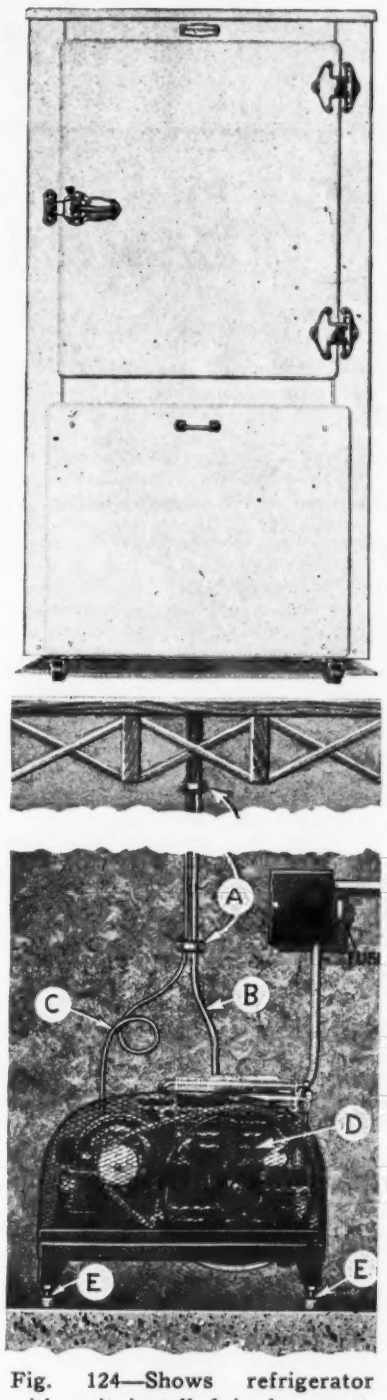


Fig. 124—Shows refrigerator with unit installed in basement. Note the neat attachment of lines to wall and how lines are run from compressor to cabinet.

Master Service Manual To Be Published About Jan. 1

Published in this issue is Chapter 8, Instalment 1 ("Installation of Refrigerators") of the Master Service Manual, prepared by K. M. Newcum. The manual is being published serially in Electric Refrigeration News, the first instalment appearing in the April 10, 1935, issue. When all the chapters have been published in the News, the information will be put in book form, with considerable supplementary material.

This manual of information on the design and operation of present-day refrigeration systems will add to the service man's knowledge, and will assist him in meeting specific problems in servicing operations in the field.

Our supply of some of the back issues has been sold out. In order to meet the demand for the complete series we make the following offers to service men:

(1) Send $3.00 for a year's subscription to Electric Refrigeration News to start Aug. 28, 1935, and we will send reprints of all previous Newcum articles (the first six chapters of the book) in pamphlet form (size 6¼x8¾ inches).

(2) Send your advance order for a copy of the Master Service Manual, enclosing $3.00 to pay for the complete book, when published, and we will send you free of charge, reprints of all the Newcum articles published in the News up to and including Aug. 21, 1935. These reprints will be in pamphlet form size 6¼x8¾ inches).

Following is an outline of the subjects and the dates of the weekly issues of Electric Refrigeration News in which the material was published:

Chapter 1—THEORY OF REFRIGERATION (April 10).

Chapter 2—PRINCIPLES OF MECHANICAL REFRIGERATION (April 17).

Chapter 3—COMMON REFRIGERANTS (April 24).

Chapter 4—CONDENSING UNITS.
Instalment 1: description of various compressor parts (May 1).
Instalment 2: stuffing box seals, flywheels, and direct-connected units (May 8).
Instalment 3: rotary compressors (May 29).
Instalment 4: care and servicing of shut-off valves and gaskets (June 5).
Instalment 5: condensers (June 12).
Instalment 6: liquid receivers (June 19).

Chapter 5—EVAPORATORS.
Instalment 1: flooded evaporators with low side float valve (June 26).
Instalment 2: high side float valves and flooded evaporators (July 3).
Instalment 3: automatic expansion valves (July 10).
Instalment 4: automatic expansion valves—continued (July 17).
Instalment 5: thermostatic expansion valves (July 24).

Chapter 6—CONTROLS
Instalment 1: low pressure controls (July 31).
Instalment 2: low pressure controls continued (August 7).
Instalment 3: thermostatic controls (August 14).
Instalment 4: thermostatic controls continued (August 21).

Chapter 7—MOTORS
Instalment 1: repulsion start-induction run motors (August 28).
Instalment 2: repulsion start-induction run motors (continued) and capacitor motors (September 4).
Instalment 3: direct current motors and belts (September 11).

Chapter 8—INSTALLATION
Instalment 1: installation of refrigerators (September 18).

Also published in this issue is No. 23 "Service Operations," a series of lessons outlined for the use of the service manager in instructing beginners.

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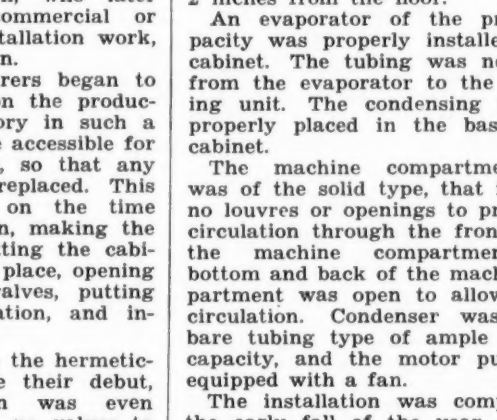

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SERVICE

Data on Servicing Ice-O-Lator Refrigeration Machines

General Description

(Continued from Last Week)

Temperature Regulator

The temperature regulator consists of a pressure diaphragm-controlled ball-type water regulator valve. The regulator is placed in series with the absorption or return ammonia gas line from the refrigerating coil. The ammonia gas passes over the top of the diaphragm and exerts a downward pressure on it.

The tension of the steel spring on the lower side of the diaphragm may be adjusted so as to allow the diaphragm to operate at a pressure corresponding to the desired cooling unit temperature. When the diaphragm operates, it causes a plunger to push the ball valve in the water regulator valve off its seat, thereby allowing the water to flow through the generator cooling coil.

When the generator has been sufficiently cooled, the ammonia pressure will also have been reduced below that which is necessary to operate the diaphragm. This will allow the water valve plunger to rise and shut off the water supply to the generator coil until there is again sufficient ammonia pressure to depress the diaphragm.

Built into the regulator is a brass tubular sleeve which supports the diaphragm unit and is graduated with four marks to indicate the tension at which the spring has been set. The readings of the graduation marks are as follows:

Top mark 30 to 35 lbs. per sq. in.
Second mark 25 to 30 lbs. per sq. in.
Third mark 20 to 25 lbs. per sq. in.
Bottom mark 15 to 20 lbs. per sq. in.

The first column of figures indicates the pressures at which the water regulator valve will *close* and the second column of figures indicates the pressures at which the water regulator valve will *open* (Fig. 5).

At the lower end of the Monel push rod is a brass adjusting screw and locknut. *The adjustment of this screw is made at the factory and under no circumstances should this be changed.* The only adjustment that should be made in the field is at the top of the bushing just described.

At the lower end of the brass sleeve supporting the diaphragm unit is a brass cylinder containing a ball type water regulator valve. There are two ports entering this cylinder on the side.

The *lower port* is the water inlet. The brass valve is held up against its seat by a bronze spring and also by the inlet water pressure in the valve chamber. When the brass plunger (actuated by the diaphragm pressing down the Monel metal push rod with the brass adjusting screw) above the ball valve pushes this valve off its seat, water is allowed to pass through the valve to the *upper port or water outlet.*

There is a stuffing box around the water valve plunger rod with an adjustable brass packing gland. Access to the valve chamber is provided by a set-screw in the lower end of the cylinder.

Temperature Control

As the ammonia gas, which is evaporated in the refrigerating chamber, is reabsorbed by the material in the generator, heat is developed. If it were not for the fact that cooling water is running through the cooling coil in the generator at this time and carrying away this "heat of absorption," the pressure and temperature of the generator would rise.

The rate of evaporation of the ammonia in the refrigerating chamber would be affected by this temperature rise since the pressure difference between the refrigerating chamber and the generator would be reduced. This fact obviously offers a means of control of the rate of refrigeration, since the amount of refrigeration done in a given time depends upon the rate of evaporation of the liquid ammonia in the refrigerating coil.

Thus, if we regulate the amount of water flowing through the generator cooling coil by means of the temperature control device (which regulates the quantity of cooling water delivered) the temperature in the refrigerating coil can be controlled accordingly. The temperature control or regulator is entirely automatic in operation and is actuated by the low side pressure in the refrigerating coil.

Honeywell Control
(Without Separate Transformer)

The Honeywell control switch is actuated by the top and bottom contacts in the refrigerating chamber. It is so designed that once the control is started, it will continue to operate until it has completed one-half a revolution of the shaft operating the water valve. This will require a period of 10 minutes at the end of which the control will automatically shut off.

Editor's Note—This is the second instalment on the Ice-O-Lator absorption unit. Description of the system is completed this week and service instructions are given. The ammonia system will be discussed next week.

Water Regulator Valve

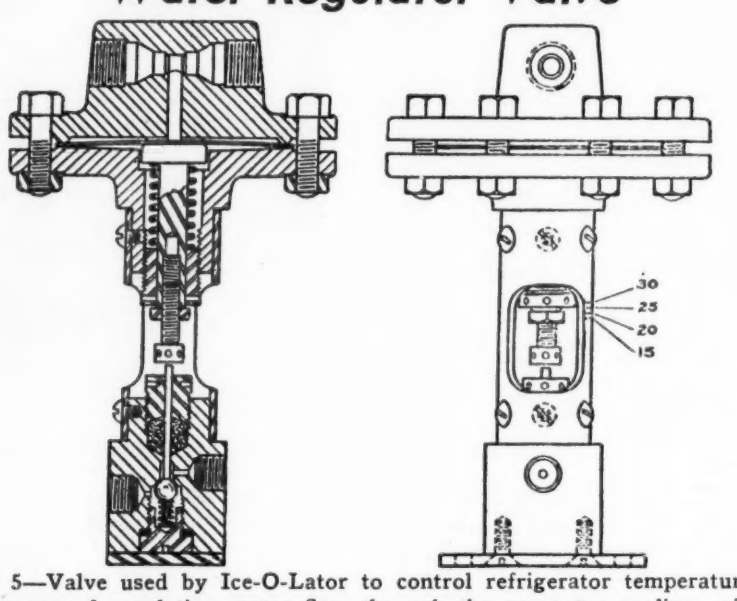

Fig. 5—Valve used by Ice-O-Lator to control refrigerator temperature by means of regulating water flow through the generator cooling coil.

The bearings are packed in vaseline and additional lubrication is required only once a year. The Honeywell is operated from the 110-volt line, but the control circuit is operated from a 10-volt line from a self-contained transformer within the Honeywell.

The large circular switch on the left side of the control unit operates the magnetic gas valve circuit. This switch is locked in position on its shaft by a set-screw and no change in its adjustment should be necessary after it has left the factory.

Honeywell Control
(With 20 Volt System Throughout)

The operation of this Honeywell control is identical to that described above, with the exception that the line current operating the Honeywell has been reduced from 110 volts to 20 volts and the control circuit is operated on this same voltage (the self-contained transformer having been eliminated).

The 20-volt transformer is to be located in the fuse box (supplied separately with the machine) which is generally conveniently installed on the wall near the machine. On Ice-O-Lators using the 20-volt transformer system, all electric circuits on the unit are for use with 20 volts only.

Gas Valve

The gas valve consists of an electromagnetically controlled steel ball valve. This valve is contained in a bronze chamber providing a beveled seat upon which the ball valve is held by gravity and also by the inlet gas pressure over it.

To open the gas valve, electric energy must be supplied to the magnetic core which will draw the ball valve off its seat and allow the gas to flow through freely. To close the valve, the electricity is shut off, thus permitting the ball to roll back on its seat.

Gas Burner

The gas burner is of the Hoffman storage water heater type and has a gauze screen to prevent back-fire. Where the B.t.u. content of the gas supply is between the limits of 450 to 550 B.t.u. no adjustment is necessary except to change the orifice to obtain good combustion. The control valve on the gas supply should be adjusted to give a pressure at the burner of from 3½ to 5 in. of water. For lower B.t.u. contents, the gas burner used should be provided with an air shutter. In cases where natural gas is used, a special burner is supplied.

Gas Pilot and Pilot Control

The pilot and pilot control are attached to the side of the burner. The heat developed by the pilot is transmitted by conduction to the thermostatic metal strip causing it to bend away from the burner and bring electric contacts together, thus completing the gas valve circuit so the valve can now be opened when the Honeywell switch is in the "heating position."

When the pilot is *out,* the thermostatic metal will return to its natural position and allow the silver contacts to separate, thus breaking the gas valve circuit so that should the Honeywell switch come into the heating position, it would be impossible for the gas valve to *open* until the pilot was lighted. The pilot adjusting valve, on the body of the gas valve chamber, controls the size of the pilot flame.

Combustion Tube

The combustion tube is made in two sections, so that it can be readily removed from the generator heater tube without completely disassembling the machine. The combustion tube is equipped with two cast iron spiral baffles for spreading the heat laterally. There is a cap over the top of the tube to prevent local overheating.

The top part of the upper tube section is provided with three spacer bolts, thus keeping it in the center of the heater tube. At the bottom of this upper tube section are two metal tabs which keep the lower tube section in alignment with it. The bottom end of the lower tube section is flanged forming a support in conjunction with two adjustable metal clamps secured to the generator base plate.

Exchanger

The exchanger is the black vertical cylinder fastened to the left-hand side of the generator. The exchanger is to condense the steam which is produced in the generator as the cooling water first passes through it at the end of the heating period. The exchanger contains a copper coil of tubing through which the steam and drain water from the generator pass before flowing to the drain.

As the exchanger cylinder acts as a trap for all water leaving the machine, there is always sufficient water in the exchanger to condense the generated steam as it passes through the exchanger coil into the cylinder and thence to the drain.

There is a drain plug in the bottom of the exchanger. It is important to drain off the water from this cylinder if the machine is to be shut down for the winter and there is danger of freezing.

The center brass compression union in the exchanger head connects the generator water outlet to the copper condensing coil in the exchanger. Either one of the other two compression unions may be connected to the ammonia condenser water outlet, while the other provides a connection for the overflow water to the drain.

Wiring Diagram for 20-Volt System

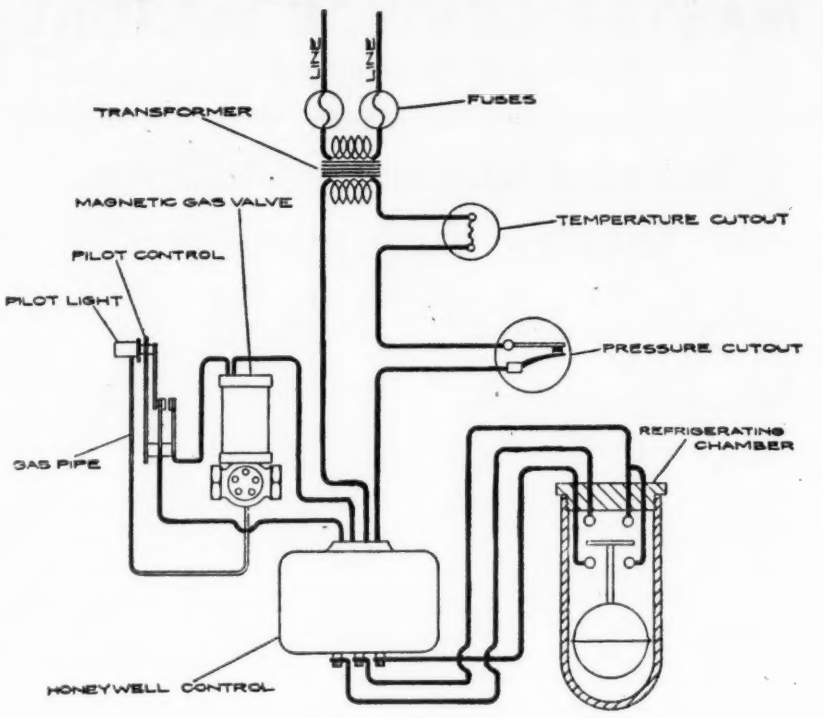

Fig. 6—This Ice-O-Lator wiring diagram shows the connections in series to the temperature and pressure cutouts, and to the Honeywell control.

Pressure Gauge and Cutout
(20-Volt System)

The pressure cutout is located on the back of the pressure gauge. The two silver contacts are mounted on spring copper and during normal operation are always in contact. The electrical circuit through them is in series with one side of the line.

When the pressure rises above 225 lbs. per sq. in., the arm which is attached to the "Bourdon Tube" of the gauge pushes against the latch which normally holds the contacts together and allows them to spring apart, breaking the circuit, and stopping the machine until the contacts are reset. Be sure that the contacts are clean before resetting them. If necessary, clean them with a thin file or a piece of sandpaper.

Pressure Gauge and Cutout
(110-Volt System)

This cutout functions directly opposite to the 20-volt system in that the contacts are held apart until the pressure rises to a pre-determined point, at which point the contacts are forced together, blowing the line fuses and stopping the machine.

Whenever the pressure cutout is found to have been the cause of blown fuses, the silver contacts should be carefully cleaned and must be absolutely parallel. Failure to follow the foregoing instructions may result in much unnecessary inconvenience to the owner as well as the service man.

Temperature Cutout

The temperature cutout is located in a recess on the back of the generator flue casing and its purpose is to break the electric circuit to the machine in the event of overheating of the generator itself. Breaking the electric circuit, of course, results in the gas burner being shut off, for the gas valve cannot remain open without electricity to energize the magnetic core.

The temperature cutout consists of two brass electrical poles bridged by a fusible link attached to a spring loaded brass lever. If the temperature in the recess containing this cutout device should rise above 200° F., the fusible link would melt and break the electric circuit. With normal operation of the machine this temperature will never be reached, but if the generator is undercharged with ammonia, the heating period will be lengthened, and the generator temperature will continue to rise until the temperature cutout operates.

Before it is possible to start the machine again, it will be necessary to replace the melted fuse with another link, but the cause of the excessive temperature should first be remedied to prevent a repetition of the melting of this device.

Rupture Diaphragm

The purpose of the rupture diaphragm is to relieve positively the pressure in the generator. The rupture diaphragm protects the machine from excessive pressure should the pressure or temperature cutout fail to operate. It is located on the ammonia filter block.

The diaphragm outlet is usually connected by a small copper tube to the cut-off-doors, or where this is not practicable special fittings can be obtained from the factory. The rupture diaphragm consists of a steel adapter which holds a silver disc (⅜ in. in diameter and .0025 in. thick) between two washers. It is absolutely positive in operation and relieves the ammonia pressure to the outside air or special container.

Electrical Wiring—20-Volt System

In Fig 6, the 110-volt line current first flows through the fuse block to the transformer. These fuses are of 3-ampere capacity. The voltage is reduced through the transformer to 20 volts. One side of the 20-volt line is connected in series with the temperature and pressure cutouts to the Honeywell. The other side of the 20-volt line is connected direct to the Honeywell. These two wires supply the power to operate the Honeywell.

The other two wires entering the back of the Honeywell form a loop in series with the magnetic gas valve core and the silver contacts on the thermostatic pilot safety device. One end of this loop is connected within the Honeywell to one side of the 20-volt line.

The other end of the loop is connected in series with the circular switch (inside the round cover) on the Honeywell to the other side of the 20-volt line, thus forming a means of completing the gas valve circuit. It should, of course, be understood that the safety pilot contacts only allow the gas valve circuit to be completed when the pilot is lighted and the thermostatic metal strip is sufficiently hot to force the silver contacts together and complete the circuit.

On the front side of the Honeywell are three binding posts colored as follows:

Blue indicating the top electrical contact connection from the refrigerating chamber.

White indicating the "Common" wire from the refrigerating chamber, or the wire which is connected outside the refrigerator to one top and one bottom contact lead wire.

Red indicating the bottom electrical contact connection from the refrigerating chamber.

There is a small revolving, two-way maintaining switch within the center of the Honeywell controlling the operation of the Honeywell itself. Two minutes after the Honeywell is started, one side of this switch will operate and keep the Honeywell in operation for a period of eight more minutes, at which time the switch

(Concluded on Page 13, Column 1)

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Service Instructions On Ice-O-Lator Unit

(*Continued from Page 12, Column 5*)

contacter will overtravel its circular contact and break the control circuit. In order to start the Honeywell it is first necessary for the contactor in the refrigerating chamber to complete the "bottom" contact circuit.

Electrical Wiring—110-Volt System

In the case of the 110-volt wiring, the line is brought to the cutout which is mounted in an approved steel box on the wall. Armored cable is run also from the cutout to the box on the lef-hand side of the machine. The binding posts are for the line and are painted black and white.

The pressure cutout is *across* the line. This applies to the open contacts when a fuse is blown due to over pressure. The other circuits are the same as in the 20-volt system except for the circuit from the Honeywell to the refrigerating chamber which is reduced to 10 volts through a self-contained transformer in the Honeywell.

Service Instructions

A. Set up the machine, make up and test the gas connections and run stack connection. Next run the water service line and connect to the lower part of the condenser tagged "water inlet" and test carefully for leaks. Then run the water drain line from the exchanger to the sink or drain decided upon. The rupture disc connection should then be made in accordance with the previous specifications. The electrical line should be run next and tested in the usual manner.

B. This work having been done, the electrical line and ammonia lines between the refrigerator and the machine remain to be connected. The wires from the refrigerating chamber are to be connected to the red, white, and blue wires in the three-conductor cable, following the tags and indicated colors. If the colors have been removed the two wires with friction tape on the ends are bottom contacts and the two plain ones are the top contacts. The other ends of the three-conductor cable should be connected to the corresponding colored binding posts of the Honeywell control.

C. If the distance between the machine and the box is 50 ft. or less, a 3/16 in. 18 gauge liquid line and a ¼ in. 18 gauge gas line may be used. If the run is over 50 ft., ¼ in. 18 gauge liquid line and ⅜ in., 16 gauge gas line should be substituted. Neither the liquid line nor gas line need be lagged. The amount of condensation is so small that it will not cause any annoyance. These lines should be run between the machine and the box and should be secured at convenient places. Fit the lines at the machine end with a compression union and plug. Enough length should be allowed at each end to make the necessary connections.

D. If the gauge shows a positive pressure of 5 lbs. or more the following "warming up" process may be omitted. Otherwise it should be followed carefully.

E. The gas should be turned on and the pilot lighted. Then plug in the electrical connection to the source of supply. As soon as the pilot contacts touch, due to the rise in temperature of the thermostatic element, the Honeywell control will start and normally about one minute later the gas valve will open and the gas burner will be ignited.

As soon as the gauge registers 15 lbs., which should require about 5 minutes of heating, break the electrical connection and the gas valve will close. The ammonia tubes can now be connected at the refrigerator first and then at the machine. The liquid line at the refrigerating chamber head is 3/16 in., 18 gauge tubing and the gas line ¼ in., 18 gauge. At the machine the liquid line should be traced as the one which leads to the bottom of the liquid valve. The gas line goes to the absorbing check valve at the filter block.

Be sure that the proper tubes are connected together when this final connection is made. The gas line is always larger and may be traced in this way. A small amount of ammonia will escape during this process but this is necessary in order to purge the air from the line. In applying the ammonia compression unions, the ammonia tubes should be cut with a triangular file and then broken off so that there is no internal burr and no chips are left in the tubes. It is not necessary to connect each of the unions very tightly.

This is a question of judgment and it is better to tighten them later than to crush the tubes in the first tightening. The machine is then ready to start and it is necessary only to plug in the electrical connections. Turn the water on and *be sure that water* is being delivered to the condenser but not the generator. The pressure should rise normally to the value indicated in the following tables which corresponds to the inlet cooling water temperature.

Gauge Pressure	Inlet Cooling Water Temperature
110	50
123	55
136	60
150	65
163	70
176	75
189	80

If this gauge pressure should rise above normal, open very slightly the small blow-off valve at the top of the liquid valve and see if the pressure drops. If it does, the increased pressure was due to a small amount of air in the system which had accumulated at the top of the liquid valve and the machine will now function normally.

This process should be repeated during subsequent heating periods until the pressure does not rise above normal. As soon as the pressure is up to normal during the heating period, test the ammonia connections just made with test papers for possible leaks. These papers are moistened and held in contact with the joint in question. If they do not show a red color, the joint is tight.

F. Test the water valve for tightness as soon as the heating is under way by removing the water tube connection at the water valve which leads to the temperature control and generator, and holding the thumb over the end of the tube and noting the number of drops of water coming from the water valve connection. If the leak exceeds 10 drops of water per minute, shut off the water supply and electrical connections and clean the valve with a clean soft cloth.

G. Test gas valve for leaks also by connecting and disconnecting electrical supply and note if gas shuts off entirely from burner. If not, clean gas valve. Note carefully the condition of the flame and make the necessary adjustments to secure good combustion.

H. The brine solution of 40 per cent glycerine and 60 per cent water by volume is syphoned into the brine tank with hose through hole in top. The tank should not be filled to within more than ½ in. of the top.

I. In order to get proper operation the above instructions should be followed explicitly otherwise the efficiency of the machine may be greatly impaired.

In checking over a defective unit the following items should be inspected before making adjustments:

1. Control Unit Position

This is usually the most important key to the situation. Note whether the control is in the position of heating or absorbing. Note also whether the control unit is warm due to continuous operation.

2. Current Supply

If the Honeywell is not running, check the current supply by short circuiting the red and white and then the blue and white binding posts of the Honeywell and note if it starts.

3. Brine Tank

Note the appearance of the brine tank and ice trays to give an idea as to how long the machine has been inoperative.

4. Pressure Fuses

Check the 3-amp. fuses to see if they have been blown. Check the pressure cutout circuit on the back

(*Concluded on Page 14, Column 3*)

SERVICE OPERATIONS

A SERIES OF LESSONS OUTLINED FOR THE USE OF THE SERVICE MANAGER IN INSTRUCTING BEGINNERS IN SERVICE WORK

No. 23—Changing Outside Liquid Line Screen or Filter at Cooling Coil (Flooded)

By K. M. Newcum

REASON:

If the liquid line screen or filter, at the cooling coil becomes clogged, or partially restricted, liquid from the receiver will not be supplied to the coil, in sufficient quantities to effect proper refrigeration, thus the screen or filter will have to be replaced with a new or clean one. This is done as follows:

PROCEDURE:

A. Evacuate the liquid line. (See Lesson No. 1.)

B. Disconnect liquid line from liquid line shut-off valve on the cooling coil.

C. Remove the clogged liquid line screen fittings, or filter, as the case may be, and replace with a new one. If a new filter or screen is not available, the old one may be cleaned and used over again.

D. Reconnect liquid line to the liquid line shut-off valve and purge the air from it.

E. Open all the valves to their respective operating positions and put the machine into operation. If the coil frosts up and the unit apparently functions properly, remove the gauges.

F. Check with the instructor.

Note: If the liquid line screen or filter is completely clogged, it will be impossible to evacuate the liquid line. If the compressor is located where the escaping refrigerant will do no harm, the liquid line may be opened, allowing the liquid from the liquid line to escape into the room, or basement as the case may be.

If the compressor is located where the escaping refrigerant will cause trouble, it is then necessary to pinch the liquid line. This is done by applying the pinch-off block to the liquid line, as near the liquid line shut-off valve on the compressor as possible. When the line has been pinched and the connection removed from the liquid line shut-off valve on the compressor, insert a ¼-in. double end flare union (coupling) into the end of the liquid line and connect to the discharge line, and submerge the discharge or purge line in lye water. See Lesson No. 11. When the line is submerged, remove the pinch-off block, and if the liquid does not come out of the line into the lye water, open the pinch by applying the flare block over the pinch. When the line has been completely discharged, immediately remove the line from the lye water and disconnect the coupling. Proceed to change the filter, as in above operation, and when finished, cut the tubing just above the pinch in the liquid line and make a new flare on the line, thus removing the pinch. This procedure is always recommended over other methods along the same line.

Service Data on Other 'Orphan' Machines

This article is one of a series published by Electric Refrigeration News to give the service man help in servicing various makes of machines. Most of the makes described to date have been "orphan" machines on which service information is no longer readily available.

Service instructions on the following makes were published in these issues:

Absopure household	March 25, 1931
Majestic hermetic	Aug. 16, 1933
Allison	May 30 & June 6, 1934
Welsbach	June 13, 20 & 27, 1934
Rice household	July 4, 1934
Wayne household	July 11, 1934
Absopure com'l	July 18, 25 & Aug. 1, '34
Iceberg	Aug. 8, 1934
U. S. Hermetic	Aug. 15, 1934
Belding-Hall ElectrICE	Aug. 22 & 29, 1934
Majestic standard	Sept. 12, 19 & 26, '34
Holmes household	Oct. 10, 17 & 24, 1934
Iroquois	Feb. 20 & 27, 1935
Socold	May 15 & 22, 1935

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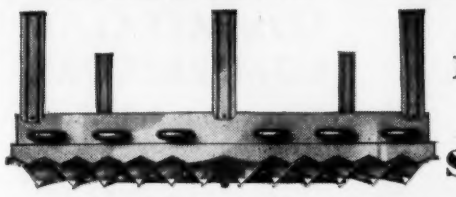

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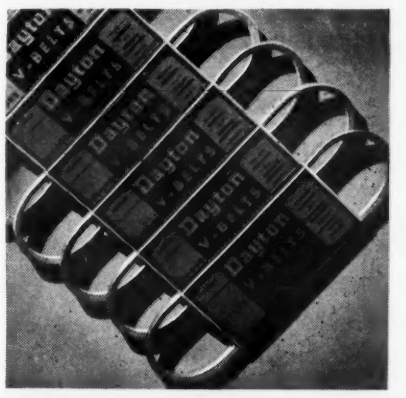

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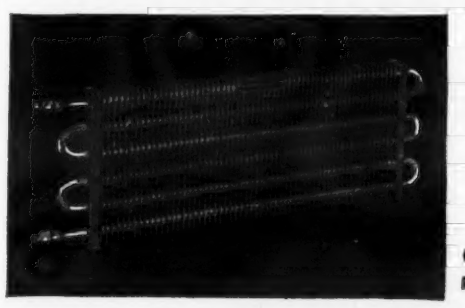

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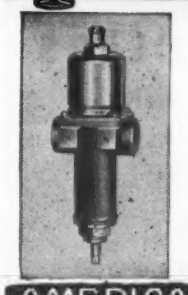

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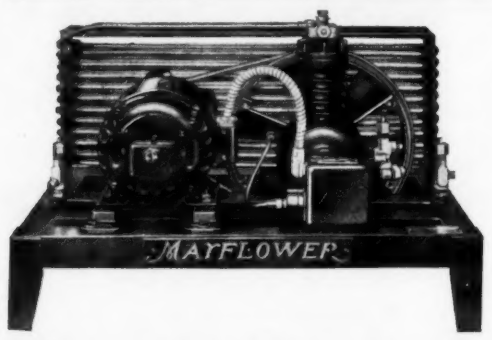

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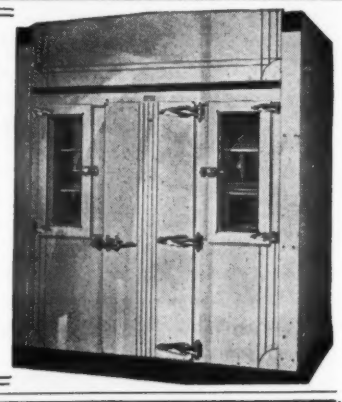

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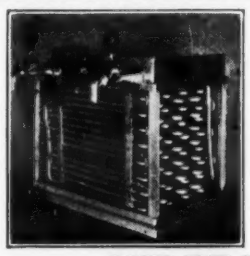

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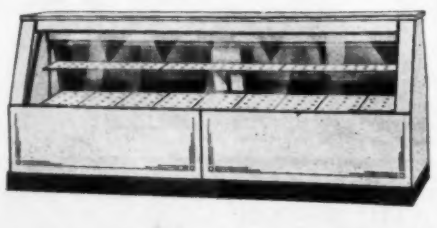

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Service Instructions On Ice-O-Lator

(*Concluded from Page 13, Column 3*)

of the gauge to see if it has opened.

5. Temperature Fuse

Remove the temperature fuse to see if it has operated.

6. Generator

Feel the generator case and note whether it is hot, warm, or cool.

7. Water Direction

Check the water direction at the water valve and be sure it is correct.

8. Water Rate

Note the water rate approximately at the outlet and record the quantity.

Testing of Leaks

9. Water Valve Leak

If it has not already been done, check the water valve carefully to determine the leak on the generator side with the water flowing through the condenser. If this is more than 20 drops per minute it will seriously lower the efficiency of the machine. (See instructions under "Installation Instructions" paragraph F.)

10. Water Leaks

Inspect the joints and tubing for any evidences of water leaks.

11. Ammonia Leaks

Look for any indications of ammonia leaks especially around the copper parts. If these show a green or blue deposit, test all the joints in the ammonia lines.

12. Electrical Connections

Check the electrical connections carefully and note if any of them have become loosened.

13. Sediment

Examine the water strainer, water valve, and lines for the deposit of sediment. Clean these carefully if necessary.

14. Refrigerating Chamber Gas Line

If this line is warm as far as the union at the back of the refrigerator toward the end of the heating period the absorbing check valve leaks. If this line delivers liquid ammonia, it indicates that the refrigerating chamber is full of liquid. Under normal operation it should deliver gas.

Liquid Valves

15 Liquid Valve Blow Off

Test the liquid valve blow off and note whether or not it delivers liquid or gas. It should deliver liquid during the first cycle only, when the refrigerating chamber and brine are warm.

16. Liquid Valve

It is usually not possible to give this a complete test on the job. If liquid is delivered from the top, loosen slightly the connection at the bottom of the liquid valve to see if liquid is being delivered there.

17 Check Valves

These are usually difficult to test on the job. Occasionally when the machine is operating satisfactorily but not freezing, the trouble can be traced to a leaky absorption check.

18. Gas Valve

Any trouble here may be due to the gas valve sticking open, sticking closed, or leaking. This may be checked by switching the machine to heating and checking the valve as to opening, closure, and leak by making and breaking the electrical connection at the source of supply.

19. Pilot and Pilot Control

Check the pilot to see if it is burning properly and the pilot control to see if the contacts are touching.

G-E Dealer Replaces Unit On Barge as It Goes Through Canal

CANAJOHARIE, N. Y.—Not "service while you wait" but "service on the run" seems to be the slogan of H. S. Billington, General Electric dealer for Canajoharie, located on the New York State Barge Canal.

Mr. Billington received word that a DC refrigerator unit had gone bad in a canal barge just coming into Canajoharie. He had a truck meet the barge just as it was coming to the lock. The unit was transferred to the truck without interrupting the progress of the vessel.

While the barge followed the canal, the truck rushed the unit 40 miles to Schenectady for replacement. Returning, the truck driver followed the canal, found the barge, stopped at the next lock, and re-installed the unit.

Tech Laboratories Make Resistance Instruments

JERSEY CITY, N. J.—Tech laboratories, newly organized company located at 703 Newark Ave. here, is manufacturing a line of standard and special precision resistance instruments and allied products for industrial and laboratory use.

The standard line includes attenuators, potentiometers, L-pads, T-pads, H-pads, and other impedance matching networks, line equalizers, sound level indicators, tap switches, precision wire wound resistors, and geophysical instruments.

PATENTS

Issued Sept. 3, 1935

2,013,134. EVAPORATOR. William D. Collins, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Aug. 10, 1932. Serial No. 628,140. 10 Claims. (Cl. 62—126.)

2,013,167. REFRIGERATING SYSTEM. William V. Musto, North Bergen, N. J. Application Jan. 26, 1934. Serial No. 708,365. 9 Claims. (Cl. 62—3.)

2,013,263. REFRIGERATOR. Charles F. Belshaw, Duluth, Minn., assignor to The Coolerator Co., a corporation of Minnesota. Application June 1, 1933. Serial No. 673,846. 12 Claims. (Cl. 62—46.)

2,013,264. COOLING PACKAGED MATERIALS. Charles G. Buder, Webster Groves, Mo. Application April 8, 1933. Serial No. 665,073. 5 Claims. (Cl. 62—102.)

2,013,372. RELIEF VALVE. Ernest Willy Work, Toronto, Ontario, Canada. Application Aug. 31, 1933. Serial No. 687,723. In Canada March 10, 1933. 2 Claims. (Cl. 137—53.)

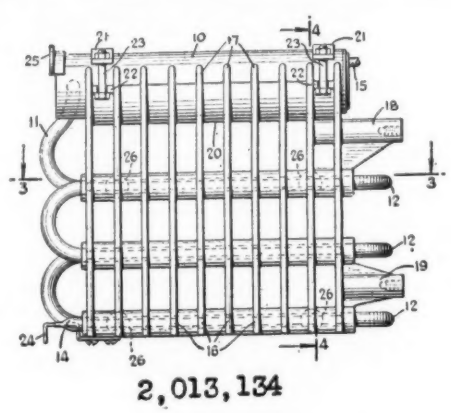
2,013,439. VALVE. Frank A. Gauger, Milwaukee, Wis. Application July 10, 1933. Serial No. 679,706. 2 Claims. (Cl. 137—139.)

2,013,469. EVAPORATOR. Donald B. Knight, Brooklyn, N. Y., assignor to Electrolux Servel Corp., New York, N. Y., a corporation of Delaware. Application Nov. 25, 1930. Serial No. 497,992. 12 Claims. (Cl. 62—91.5.)

2,013,515. REFRIGERATING APPARATUS. Edward Heitman, Detroit, Mich., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application Sept. 23, 1932. Serial No. 634,505. 4 Claims. (Cl. 62—126.)

2,013,516. REFRIGERATING APPARATUS. Edward Heitman, Detroit, Mich., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application May 12, 1934. Serial No. 725,305. 2 Claims. (Cl. 62—126.)

2,013,521. REFRIGERATING APPARATUS. Herbert H. McGehee, Memphis, Tenn., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application March 14, 1934. Serial No. 715,403. 2 Claims. (Cl. 62—126.)



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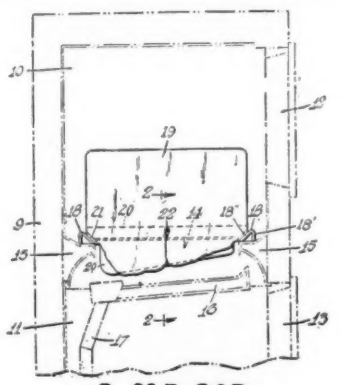

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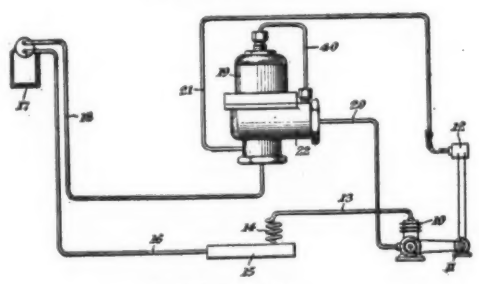

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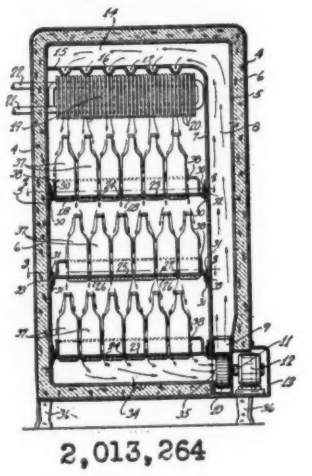

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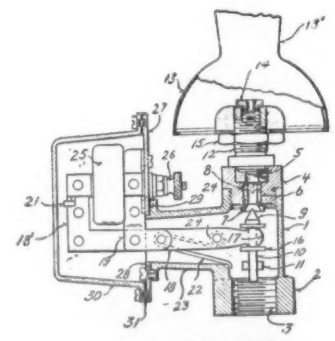

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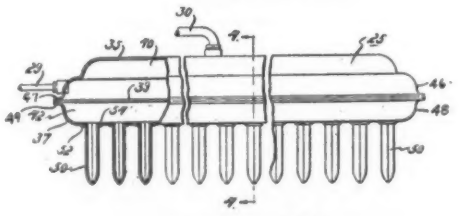

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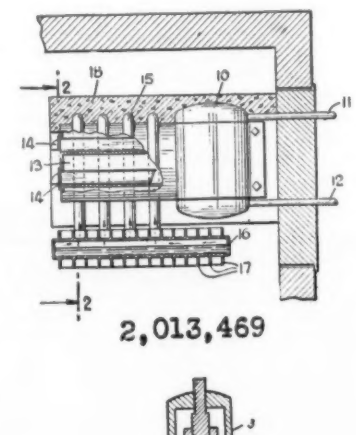

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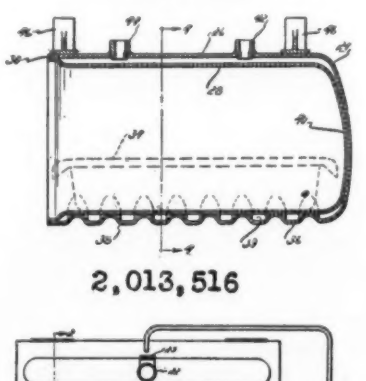

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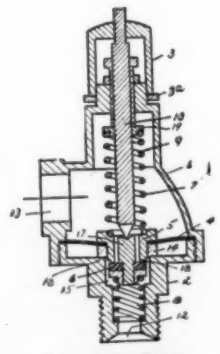

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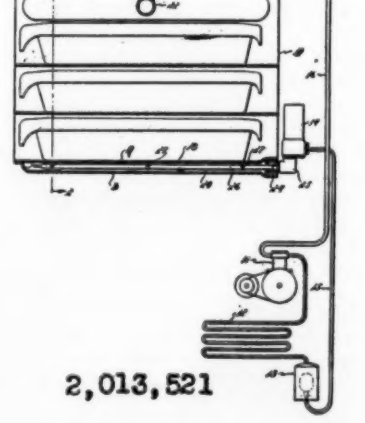

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Kitchen Plan Results in Sale of 2 Appliances

DALLAS—Curious about the planning service of the General Electric Kitchen Institute, Prof. and Mrs. J. H. Hicks of this city dropped into the salesroom of Electric Household Appliances, Inc., here, to inquire about it. L. G. Reed, floor salesman, explained the service and discussed an all-electric kitchen.

A rough sketch was sent to the institute staff, plans were drawn for the modernization of the kitchen, and recommendations were incorporated in the Hicks' kitchen. Prof. Hicks, who occupies the chair of theology at Southern Methodist university, purchased a G-E DSF dishwasher and a G-E Marquis range.

Pratt Appoints Cooke Assistant Engineer

SAN FRANCISCO — Rowland F. Cooke, refrigerating engineer, formerly a dealer in Taylorsville, Calif., has been added to the staff of California Refrigerator Co. here, reports Clarence F. (Sandy) Pratt, president. Mr. Cooke will be assistant to Chief Engineer Jess E. Rauch.

BUYER'S GUIDE

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Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

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1935 REFRIGERATION & AIR CONDITIONING MARKET DATA
1935 REFRIGERATION & AIR CONDITIONING DIRECTORY

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	Electric Refrigeration News (weekly)	1935 Refrigeration Directory and Market Data Book (2 volumes)	Both Electric Refrigeration News and Directory and Data Book
1 subscription	$3.00	$5.00	$6.50
5 or more each	2.75	4.50	6.50
10 or more each	2.50	4.00	6.50
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75 or more each	1.75	2.50	4.25
100 or more each	1.50	2.00	3.50
For All Other Countries (Except Canada)			
1 subscription	$5.00	$6.00	$9.00
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10 or more each	4.50	5.00	8.00
20 or more each	4.25	4.50	7.50
50 or more each	4.00	4.00	7.00
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1 subscription	$6.00	$6.00*	$11.00*
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10 or more each	5.50	5.00*	10.00*
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50 or more each	5.00	4.00*	9.00*

*Canadian subscribers are required to pay a tariff and excise tax on the Directory and Market Data Book which amount to $1.00. These extra charges on books will be collected by the Canadian postoffice at the time of delivery.

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Attention of
In Care of .....

Street Address .....City and State.....

We sell the.....refrigerator and .....
(Please indicate other products or principal line of business.)
9-18-35

QUESTIONS

Sales by Companies

No. 2460 (Dealer, Texas)—"Will you kindly give the leading refrigerator companies in order as to volume of sales for 1935?"

Answer: Sales figures by individual manufacturers are not made public.

Total monthly sales figures by manufacturers who are members of the Refrigeration Division of the National Electrical Manufacturers Association are published in ELECTRIC REFRIGERATION NEWS, and at the end of the year ELECTRIC REFRIGERATION NEWS estimates the total number of refrigerators sold by all manufacturers.

Monthly Sales Figures

No. 2461 (Advertising Agency, Illinois)—"Will you please furnish us with domestic electric refrigerator sales in units by months for 1934, and by months up to the latest figures you have available for 1935? We will appreciate your cooperation very much."

Answer: Domestic electric refrigerator sales in units by months for 1934, and by months in 1935 through July, distributor to retailer, are as follows:

Months	1934	1935
Jan.	38,000	103,400
Feb.	82,500	128,400
March	149,000	228,000
April	255,400	281,900
May	268,600	261,100
June	187,600	174,860
July	122,400	167,000
Aug.	87,700	
Sept.	46,300	
Oct.	41,600	
Nov.	35,700	
Dec.	75,800	

List of Dealers

No. 2462 (Manufacturer, Ohio)—"Can you advise us where we can secure a list of selling organizations who specialize in household refrigerators, particularly in Chicago and New York?"

Answer: Consult the classified telephone directories of those cities.

Thermostatic Control

No. 2463 (Engineer, New York)—"I am informed that an article by D. D. Wile regarding the maintenance of a constant temperature differential in a refrigerator evaporator by means of thermostatic valves was published in one of the 1933 issues of REFRIGERATED FOOD NEWS," which I am further informed is published by your company.

"I would appreciate it very much if you could furnish me with a copy of this article."

Answer: The article you mention was published in the April 1, 1933 issue of REFRIGERATED FOOD NEWS (now combined with ELECTRIC REFRIGERATION NEWS).

'TerraCold' Refrigerator

No. 2464 (Distributor, Alabama)—"We will appreciate it if you can furnish us with any information about a refrigerator known as "TerraCold" and made somewhere in Michigan."

Gas Fired Conditioner

No. 2465 (Dealer, Texas) — "A couple of months ago, you published an article describing air conditioning operating off of gas. The writer would appreciate a copy containing this article."

Answer: The article describing an air-conditioning system operated by gas, was published on page 6 of the March 27, 1935 issue of ELECTRIC REFRIGERATION NEWS.

Compressor Blue Prints

No. 2466 (Manufacturer, Illinois)—"We are interested in obtaining blue prints covering the various compressors made by Frigidaire and Kelvinator up to date.

"We understand that you are in a position to supply us with this data, and if so we assure you that the same will be greatly appreciated."

Answer: We do not have blue prints coving the various compressors made by refrigeration manufacturers. For the past few years we have been publishing specifications of household and commercial refrigeration machines, which give some engineering data about the various units, but our stock of specifications issues for this year is exhausted.

Draft Gauge

No. 2467 (Manufacturer, Maryland)—"Could you kindly enlighten us as to the names of manufacturers marketing a draft gauge in connection with air-conditioning work. We understand that these draft gauges are made from Fibestos, or an equally transparent material."

Answer: Try the following firms:
Julien P. Friez & Sons, Inc.
4 N. Central Ave., Baltimore, Md.
United States Gauge Co.
44 Beaver St., New York, N. Y.

List of Manufacturers

No. 2468 (Dealer, New York)—"We should appreciate your supplying us if possible with a list of active manufacturers of electric refrigerators."

Answer: All active manufacturers of household electric refrigerators are listed starting on page 235 of the 1935 REFRIGERATION AND AIR CONDITIONING DIRECTORY.

Ring Removing Device

No. 2469 (Service Man, New York)—"I would like to find out how the ring holding the starting device and necklace in on the Frigidaire Motor Model 5199 is removed. I have tried everything but have reached the conclusion that possibly a special puller must be used to move it. The ring used is not of the conventional type, using sort of a slip ring.

"Here is some further information on describing the motor so as not to leave any doubt as to its identity. Serial 6-1-2, ⅛ hp., 110-220 volts.

"Should a special device be required, please let me know where I may obtain same."

Answer: We have been told by the local office of United Motor Service Co., which handles service on Delco refrigeration motors, that they have had to construct a special device to remove the ring to which you refer. The United Motor Service New York office can probably assist you with this problem, as these devices are apparently especially built for shop use.

McIntire Dehydrators

No. 2470 (Distributor, Pennsylvania)—"We are interested in obtaining the name and address of the manufacturer of the McIntire dehydrators, dehydrate-filter, and neutralizer."

Answer: The McIntire Connector Co., 253 Jefferson St., Newark, N. J.

Gas-Cooled System

No. 2471 (Dealer, Texas)—"In your issue of March 13, 1935 on page 15, you described a Long Island restaurant air-cooled with gas. I would appreciate it very much as to where I can get in touch with the manufacturers of this equipment."

Answers We do not know the name of the manufacturer of the equipment used in the Long Island restaurant, but believe that the information might be obtained from the Silica Gel Corp., Baltimore Trust Bldg., Baltimore, Md.

Sales in Vermont

No. 2472 (Manufacturer, Illinois)—"I wonder if you have any figures available on the sale of electric refrigerators for this season in the state of Vermont.

"I am informed that an accurate count is kept by the power companies and utilities and immediately after a sale is made by any dealer it is reported to this organization and the figures are easy to obtain. You probably have them.

"If you can furnish us the figures by county, it would be much appreciated, or any other information that you can give will be welcome."

Answer: As far as we know, there is no accurate record of household electric refrigerator sales kept by all power companies.

The Edison Electric Institute issues a report on monthly sales of household electric refrigerators by states, but it is specifically stated on each report that these figures are based on a report issued by the National Electrical Manufacturers Association (Nema). The Nema figures are used as a basis for the ELECTRIC REFRIGERATION NEWS estimate of sales.

For the first seven months of this year, household electric refrigerator sales in Vermont are estimated at a total of 2,990 units. While no figures by counties are available, you might be able to obtain a rough estimate by employing the wired homes figures for Vermont counties, as published on page 211 of the 1935 REFRIGERATION AND AIR CONDITIONING MARKET DATA BOOK; taking the percentage of wired homes for any one county to the total number of wired homes for the state as the percentage of sales by any one county to the total number of sales for the state.

Crosley & Philco Dealers

No. 2473 (Manufacturer, Georgia)—"We are wondering if by any chance you could tell us about how many local dealers the Crosley Radio Corp. has, and also the Philco Co.

"If you do not have this information yourself, perhaps you can tell us where we could likely get it, other than by writing direct to the companies.

"We have been constant readers of ELECTRIC REFRIGERATION NEWS for quite some time, and look forward to getting our copy each week. We just want to say here that we think it is one of the best and most 'newsy' publications we have ever seen."

Answer: The manufacturers represent the only authoritative source of information on the number of dealers they have enfranchised.

CLASSIFIED

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

WANTED: Experienced commercial salesman acquainted with Michigan territory. Opportunity to work into position of sales manager with distributor for nationally known line of commercial refrigeration and air conditioning. Give detailed record. All replies will be kept confidential. A great opportunity for someone definitely qualified for the work. Box 729, Electric Refrigeration News.

POSITIONS WANTED

REFRIGERATION DRAFTSMAN AND ESTIMATOR for manufacturer or dealer, 14 years with one firm in charge of estimating and drafting department, designing, developing, writing specifications, detailing and billing orders for production, or complete market equipments, public and private, refrigerator for any commercial purpose, display or storage, with proper refrigerating equipment complete. Address John Rohrer, 3621 Liberty Heights Ave., Baltimore, Md.

EQUIPMENT FOR SALE

FOR SALE: 2000 New 1935 Compressors with or without motors. Box 729, Electric Refrigeration News.

EQUIPMENT WANTED

WANTED FOR EXPORT by responsible distributor quantity of discontinued electric refrigerators, any year, make or size. Also any nationally known used electric refrigerators in any quantities. We can use any amount of commercial units, or any refrigerator equipment. We pay cash. Artic Export Sales Co., 6 West 15th St., New York, N. Y.

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